THE TIMES
Higher Education
SUPPLEMENT

Overseas students 'hit by new curbs on grants'

By Peter David

Overseas students seeking grants could be faced with new and tighter restrictions after a recent Department of Education and Science circular on residence requirements, it was claimed this week.

The claim is made in a joint letter sent to the department by the United Kingdom Council on Overseas Student Affairs, the Joint Council for the Welfare of Immigrants, and the National Union of Students.

They describe the DES circular, which advises local education authorities on the definition of ordinary residence, as "an attempt to do by stealth what ministers lack the courage to do by open political decision."

The three organizations fear that by leaving it to local authorities to decide whether students are ordinarily resident and therefore entitled to an automatic grant, the circular will encourage councils to bring in new cost-cutting measures at the expense of overseas students.

Essex County Council and the London Borough of Hounslow have already put themselves in possible breach of the 1976 Race Relations Act by imposing new restrictions on overseas students, the letter claims.

The councils have begun to exclude periods of residence in the United Kingdom under the restrictions of the Immigration Act from counting towards ordinary residence for grant purposes. In the past, people who have spent three years in the United Kingdom have generally been eligible for mandatory awards whether their residence was restricted or not.

Changes of this sort could lead to a local authority being accused of practising indirect discrimination under the Race Relations Act, the letter warns. It calls on the Secretary of State to amend the regulations and define ordinary residence "in such a way as to rule out indirect discrimination".

Legal advice on the definition of ordinary residence offered in the DES circular is described in the joint letter as "highly partial, dependent on extremely selective citation of cases, and contrary to the interpretation of ordinary residence under the 1971 Immigration Act".

The letter takes issue with an implication in the DES circular that overseas students cannot be ordinarily resident while there is a time limit on their stay. It also criticizes the department for ignoring the distinction between ordinary residence and domicile in the UK.

It adds: "Allowing authorities freedom to interpret ordinary residence for the purpose of awards will increase the mounting inconsistencies between authorities, with statutory awards being made in one area and refused in another.

"It will upset the educational plans of many students and promote uncertainty and resentment amongst this already hard-hit section of the student population." By issuing the circular without prior discussion the DES is "in breach of consultative procedures", the letter says. It calls for an urgent meeting to discuss the implications of the circular.

If a meeting is held, the UKCOSA will also raise the problem of newly-settled immigrants who are forced to wait three years before being able to qualify for ordinary resident status and attend university.

One in 5 lecturers lost jobs in cuts

Unemployment among lecturers at colleges of education who have been made redundant by teacher training cutbacks could be as high as 20 per cent and will probably get worse, according to a recent survey.

Returns to a questionnaire sent out to colleges which are either being closed or reduced in size reveal that unemployment among lecturers made redundant in 1975-76 was almost 20 per cent and in 1976-77 was 26 per cent.

The statistics based on answers from 24 colleges show that of 43 lecturers forced to give up their teaching posts in 1975-76, eight were unemployed while the remainder had found an alternative job in education. Of those made redundant in 1976-77, 25 out of 91 were unemployed.

Although those responsible for initiating the survey urge caution when interpreting their returns because of the limited sample and because of some doubts about the accuracy of the replies, they say the findings are a "fair reflection" of what is happening nationally in colleges of education.

Dr Ian Waitt, senior lecturer in history at Darlington college of education, and Mr Geoffrey Austwick, head of mathematics at Middleton St George college of education in County Durham, both feel that unemployment is likely to get worse as more colleges close.

Their survey, produced for the sixth annual conference for closing colleges at Milton Keynes college of education earlier this week, reveals that from 1976 to 1981-82 552 full-time and 62 part-time staff have been or will be made redundant in the 24 colleges. A further 46 full-time posts and three part-time posts will also be lost according to additional estimates.

The survey also reveals that very few lecturers at colleges of education going into other education posts get jobs of equivalent status. Of 25 senior lecturers made redundant in 1975-76 only found posts of equivalent status. Of 47 senior lecturers made redundant in 1976-77 only 18 found equivalent posts.

The survey also says that colleges have varying degrees of success in obtaining redundancy payments for staff for retraining. In one college of education, a technical college, and Middleton St George, both maintained colleges, have had considerable success in negotiating either with the DES or the local education authority to grant redundancy for staff.

In other cases the situation is gloomier and colleges have been unsuccessful in obtaining approval for redundancy payment. Dr Waitt believes that this is especially the case with voluntary colleges seeking approval from the DES. He suggests that some colleges of education have been able to negotiate more favourable rundown procedures by not admitting any new students in the run-up to closure.

The survey also reveals that very few lecturers at colleges of education going into other education posts get jobs of equivalent status. Of 25 senior lecturers made redundant in 1975-76 only found posts of equivalent status. Of 47 senior lecturers made redundant in 1976-77 only 18 found equivalent posts.

The survey also says that colleges have varying degrees of success in obtaining redundancy payments for staff for retraining. In one college of education, a technical college, and Middleton St George, both maintained colleges, have had considerable success in negotiating either with the DES or the local education authority to grant redundancy for staff.

In other cases the situation is gloomier and colleges have been unsuccessful in obtaining approval for redundancy payment. Dr Waitt believes that this is especially the case with voluntary colleges seeking approval from the DES. He suggests that some colleges of education have been able to negotiate more favourable rundown procedures by not admitting any new students in the run-up to closure.

coming later.

DES faces 2,000 claims over jobless teachers

The Department of Education and Science could have to fight up to 2,000 claims for compensation from former lecturers at colleges of education, it was claimed this week.

Mr Keith Scribbins, a salaries official in the National Association of Teachers in Further and Higher Education (NATFHE), said the claims would go to industrial tribunals if the DES continued to renege on its promise to compensate teachers from voluntary colleges who lost their jobs as a result of the cutbacks in teacher training.

Speaking at the sixth annual conference for closing colleges, he said the DES was adopting a very restrictive attitude to paying compensation under the Colleges of Education (Compensation) Regulations 1975.

Under the regulations any teacher who has lost his post in a college of education because of cutbacks in teacher training may become entitled to three kinds of compensation, namely resettlement compensation, long-term compensation and retirement compensation.

Teachers who move immediately to another post in a school or college are also entitled to have their previous salary level protected irrespective of the grade of the new post.

One of the conditions of receiving the resettlement compensation, which could be several thousand pounds, is that the teachers should not have been offered a job which is reasonably comparable with their former post.

Originally the DES tried to stop the payment of resettlement compensation to claimants whose salary was safeguarded on the grounds that because they were paid the same money as before the two jobs were comparable. But by fighting the DES in industrial tribunals, NATFHE has established that college lecturers who move to scale one teaching posts in schools are not moving to comparable posts and are therefore entitled to compensation.

However, the DES is still refusing to pay compensation if teachers get a post above scale one—even though Mr Scribbins argues that these posts would not be regarded as comparable. By comparison, he says, local authorities, which are responsible for compensating teachers from maintained colleges, are being much more generous and have paid up in almost all such cases.



Brian Hoskin as Estragon and Walt Kennedy as Vladmir in Beckett's Waiting for Godot at the new Crawford Centre for the Arts at St Andrews University which has just opened its first professional season.

Prior calls for 'Open Tech'

Teaching techniques used by the Open University could be adapted to provide an "Open Tech" for industrial training, Mr James Prior, Opposition spokesman on employment, has suggested.

Hailing the Open University as "one of the educational successes of the past 10 years" Mr Prior told the Young Conservatives conference in Harrogate last Saturday that there might be an opportunity to conduct a similar exercise to train people in job skills.

He said unemployment stretched as far ahead as any prudent forecaster had cared to look. Mr Prior called for a sympathetic—but realistic and imaginative—response to the problem.

Employers and trade unionists had understandable fears on training. Management was concerned that, having financed a programme, a competitor might entice the qualified employee away. Trade unionists were inclined to view trainees as a threat to their own jobs or affecting the chances of their jobless colleagues returning to work.

It was necessary to say to both groups: "People in training are our seed-corn, you cannot do without them." But training was costly, and expertise and facilities limited, Mr Prior added.

"Imagination is needed, and I want to make a suggestion of a possible means of increasing our training capacity greatly", he told the conference.

Spare capacity in industry could be made available for practical training, and more use could be made of existing skill centres and company training facilities.

Fibres course shut down

by Robin McKie

A course in fibre science and textile technology at Strathclyde University is to be closed down—and the Government's campaign to cut numbers of overseas students is being given as one reason for the move.

No more undergraduates will be admitted to the course after October, although the university has pledged to meet its obligations until at least 1982. A statement by the senate revealed that for years the number of applications had been causing concern.

"It is now clear that the number of United Kingdom students likely to be anxious and qualified for admission has not improved. This also comes at a time when it is being made clear that the Government wishes to see a reduction in the proportion of places in university courses occupied by students from overseas", says the statement.

These problems made it unrealistic to continue with the course, but the senate emphasized that the decision was no reflection upon the staff, the students, or the reputation of the course.

But if interest in the course revives, the university has promised to consider reintroducing it. In the meantime the present 30 students in all four years of the course will continue to work for their BSc degrees, and, after that, the department will concentrate solely on its portfolio: teaching and research. About 30 graduates are involved.

Hall studen overcharg says NUS

The National Union of claimed this week to have showing that a large ma British universities have b ing higher fees in their residence than are allow student grants.

The union is asking f meetings with the Univer Committee and the Con Vice Chancellors and Pri discuss the results of a su ing that more than 5 students in university hal ing excessive fees. In universities nearly 40 pe students in residence a charged fees which are £50 higher than the h lodging element of t according to the survey.

At Heriot-Watt, the Sc hall fees were £685 a yea more than the grant of £164 higher than fees in comparable accommodation tingham University.

A report accompanyi very says: "It is patently for some students to get a week more than other lar accommodation jus they are studying in differ of the country. It is ri ridiculous that students sh so much for hall accommo the first place."

The Department of Educ longer publishes a breakd how student grants are ca The NUS estimate, based last official DES analysis is that the board and lod ment of the average stude is £580. Books, materials, travel, clothes and pocke are estimated to account £340 of grant.

The NUS survey repo universities outside Lond more than £580. At London the union estimates the ave lodging element at £15 wh of residence charged are

NEXT WEEK

Down with the professo

What research revolution

Women and the OU

New psychology books

Laurence Martin, the ne chancellor of Newcastle sity, talks about his work

Reginald Jones, author Secret War, describes s in British scientific intel

Allan Rodway on "The phy of Composition"

G. THES NEWSPAPERS LIMITED 1978
Printed and Published by Times Newspapers Limited at New Printing House Square, Gray's Inn Road, London WC1X 8EZ
Registered as a newspaper at the Post Office
Price 20p

Student union fee scheme would cost £5.5m more

by Peter David

A revolutionary scheme to increase spending on student unions to more than £20m a year has been drawn up by the Department of Education and Science for submission to the Public Accounts Committee.

The new scheme, which the DES estimates to be 25 per cent more expensive than the present system, is closely modelled on proposals submitted to the Secretary of State by the National Union of Students, and vigorously opposed by the local authorities, which will have to foot much of the bill.

It guarantees a £15 student union fee for all full-time students receiving mandatory grants. The £15 would be a compulsory "basic element", paid by a student's home local authority to his college for transmission to the student union, which would then be topped up by individual colleges following negotiations with their local student unions about spending requirements.

According to confidential DES plans it will cost some £21m to implement in 1979, compared to £16.5m if the present system of finance was continued.



Sue Slipman, NUS president

The extra cost to public funds is estimated at £5.5m because contributions from private sources would decrease. The DES would supply an extra £3.3m and another £700,000 would have to be raised through rates. The balance would be met by "other public sources".

But the new scheme could cost even more, the document reveals, if evening students and younger students on non-advanced courses are included. "Students under the age of 18 at the beginning of their courses pay no fees. If any compulsory basic element for them would have to be paid by the providing local education authority the cost would be substantial."

Local government spokesmen made their opposition to the plan clear when it was first espoused by Miss Sue Slipman, president of the NUS. Mr Gordon Cunningham, education officer of the Association of County Councils, said that the £15 threshold was "quite unacceptable".

Oakes concludes on note of national cooperation

by Judith Judd

A new national body to manage colleges and polytechnics should work closely with the University Grants Committee, according to the unpublished report of the Oakes Committee, which will be signed next week.

The report of the committee, which has been investigating the management of higher education, says that if voluntary co-operation fails, the Secretary of State for Education should bring the two bodies together and resolve any contentious issue.

The committee's terms of reference prevented it from making recommendations about the future of the binary system but required it to consider how higher education in the public sector could be better coordinated with the universities.

The new national body will differ from the UGC because local authorities will retain some control of higher education in the public sector but the report says that its creation will improve opportunities to ensure the plans of the two sectors are not duplicated.

It says: "On some occasions development in the maintained sector will need to be modified to take account of parallel developments in the universities; on others the reverse will be required since it is important that the responsibility for adaptation to changing circumstances does not fall solely on the maintained sector."

The report recommends that the new national body, the UGC and the Department of Education and Science should try to find out more about the supply and demand in different types of higher education. It also recommends that universities should be invited to cooperate with nine new regional councils in regional planning and especially over the in-service training of teachers.

The report says that a key question as the rate of higher education expansion slows down will be the growth or contraction of different subjects. The UGC already has a range of subject committees and "it may well be desirable for the new national body to establish similar committees also."

"We believe that both the UGC and the universities generally would welcome the opportunity that more systematic arrangements for the management of maintained higher education would provide for developing cooperation across the binary line on a sounder and more continuing basis than has hitherto been possible."

Exclusive extracts from the report, including a summary of the recommendations, are printed on page 4.

THE TIMES
Higher Education
SUPPLEMENT
February 24, 1978 No 329 Price 20p

AUT/THES one-day conference on the universities and the future of Britain

DES looks into 1990s

by Peter Scott

The number of full-time and sandwich students in higher education is likely to increase by 89,000 over the next six years, stabilize at this peak of 600,000 for a further six years, and then contract by 70,000 back almost to the present level by the middle 1990s.

This is the central projection of future student demand contained in a discussion document *Higher Education into the 1990s* published yesterday by the Department of Education and Science and the Scottish Education Department.

It is the first tentative look by the Government beyond 1981, which has been the terminal date of all previous projections.

The discussion document was unveiled by Mr Oakes, MP, Minister of State at the DES, at a conference on the universities and Britain's future organized jointly by the Association of University Teachers and *The Times Higher Education Supplement* in London.

It is an attempt to examine the likely impact of the falling birth-rate on the demand for higher education. This year there are 831,000 18-year-olds in Great Britain. This figure will rise to a peak of 941,000 in 1983 and then fall sharply to 630,000 in 1994-95. The present indication is that the birth-rate will go on declining.

This rise and fall has become known unofficially among ministers and officials as the "hump". The intention of this document is to promote discussion about the various strategies open to higher education to "tunnel" through it.

It says: "At present unit recurrent costs (averaged out across higher education as a whole), the "hump" between now and 1994, when the projected numbers fall back to approximately the present level, represents a total additional cumulative expenditure of about £2.5 billion." The two departments also calculate that additional capital expenditure of about £200m would be required to accommodate the 600,000 students expected at the peak of the hump.

The document also contains two other projections of future demand. A "high variant" assumes that the proportion of the age group qualified for and willing to enter higher education will increase from the present 14 to 21 per cent over the next 16 years. This would mean that the full-time student population would reach a peak of 660,000 in the end of the 1980s and then fall back to 594,000 in 1994-95.

The "low variant" assumes that the participation rate will only creep up from 14 to 15 per cent. This would create a different picture: the peak in the middle 1980s would only be 551,000 and there would then be a decline to less than 463,000 10 years later—well below the present total. The central projection assumes that the participation rate will increase to 18 per cent.

The department then consider five possible "models" for the future, although they emphasize they are not so much policy options but "the strands out of which a policy might be woven." The first three assume that the pattern of higher education would remain much as it is now; the fourth and fifth explore the consequences of changes.

Model A simply assumes that the system would be expanded and then contracted in accordance with the projected numbers. This would mean acquiring buildings and staff to cope with the "hump" which, by the middle 1990s, would no longer be needed.

Model B assumes that the scale of expansion after 1981 is deliberately reduced so that the need for damaging contraction after 1990 is similarly reduced. The drawback is that this involves a substantial risk of making it much more difficult for school leavers to enter higher education in the years of the peak. This would amount to an abandonment, explicit or implicit, of the Robbins principle.

Model C is what the department calls a "resources" approach. It would involve providing in full for the expected "hump" but doing so on a basic budget. This would be done either by renting the necessary buildings and employing the necessary staff on a temporary basis, or by taking the extra students without any increase in buildings or staff. The latter would involve a 7 per cent squeeze in present buildings standards and staff/student ratios.

Model D is an attempt to maintain the intake of students at the required level to satisfy demand but to constrain their total number. This could be done by encouraging more students to take two-year rather than three-year courses, to study part-time rather than full-time, or to defer their entry into higher education for a period after leaving school.

Model E raises, but does not consider in detail, the possibility that because of social, cultural and economic changes there may not be after all a decline in the number of students in higher education in the 1990s.

Copies of the discussion document are available from Room 1/27, Department of Education and Science, Elizabeth House, York Road, London SE1 7PH, and from Mrs. Young, Division V, Scottish Education Department, 8 George Street, Edinburgh.

Conference Report, page 28

Fourteen questions on which the departments would welcome views are given in the document. They should be sent to:

The Permanent Secretary, Department of Education and Science, Elizabeth House, York Road, London SE1 7PH,

or, The Secretary, Scottish Education Department, New St. Andrews House, Edinburgh EH1 3SY.

i. are the projections of student numbers based on reasonable assumptions?

ii. could higher education institutions contract their provision as sharply in the early 1990s as those projections imply?

iii. does it make sense for the higher education system to expand to meet the full peak in projected student numbers?

iv. would it be wiser to aim at a lower peak provision to avoid difficulties of subsequent contraction?

v. should the Robbins principle continue to guide the provision of higher education?

vi. what scope is there for encouraging students to embark either on shorter full-time courses or on part-time courses?

vii. would it be feasible and desirable to develop deferred entry to higher education on a sufficient scale to make a major contribution to easing the problems of the 1980s?

viii. what scope is there for reducing higher education cost per student by improved use of resources without reducing the quality of educational provision?

ix. how far could the problems of the 1980s peak be reduced by limiting resource commitments to the short term through the use of temporary staff and accommodation?

x. during the peak years would such temporary expedients as longer terms or summer terms be acceptable to the higher education institutions?

xi. what measures might be found to extend participation on a broader social basis so as to avert a demographically-linked decline in student numbers at the end of the 1980s?

xii. what would be the advantages and disadvantages of using resources no longer required for young home entrants to extend educational opportunities for people in employment?

xiii. what would be the implications of any changes in the present pattern of higher education for the structure of student awards and of higher education courses and qualifications?

xiv. if the diversity of our institutions is a source of strength in meeting diverse needs, might some of the answers to the above questions desirably be different for the universities on the one hand and the maintained sector of higher education on the other?

Contents

The professionals



Ian Glover and Mike Fores argue that the domination of the professions has led to inefficiency and frustration in British industry, 15

Guy Neave visits France's most famous engineering school, the *Ecole Polytechnique*, 10

Women and the OU

Pauline Kirk discusses how the OU can help raise women's consciousness, 11

Military dons

Robin McKie talks to Professor R. V. Jones, author of *Most Secret War* and foe of the Robbins expansion, 9

Judith Judd interviews Professor Laurence Martin, the defence expert who has just become vice-chancellor of Newcastle University, 9

Psychology books

Anthony Clare, H. R. Schaffer, and D. B. Bromley are among the reviewers of new books on psychology, 19-22

Polytechnic pay

Letters on how much lecturers should be paid from the director of Hatfield Polytechnic and the vice-president of the AUT, 14

North American news	5
Oversens news	6
Don's Diary	7
Noticeboard	8
Letters	14
Books	19-22
Classified index	23

Professionals criticize green paper omissions

by Robin McKie
Science Correspondent

The green paper "Education in Schools" has been condemned by the Council of Science and Technology Institutes for omitting any mention of the role of professional bodies. It follows a similar response from the Institute of Mathematics and its Applications which wants a more clearly defined part to play in consultations about education.

The CSTI has strongly recommended that representatives of the professional science institutes should be involved in talks about careers or the role of industry. It has also urged that the Department of Education and Science should make the most effective use of science institutes' resources.

While deploring the lack of comment on the role of professional bodies, a council report says: "The professional officers and the education committees of the science institutes are very much involved in the training of scientists and science teachers. They also conduct a considerable amount of career work since they are the only bodies to which pupils, their parents and their teachers can turn for professional advice.

However, the council has backed the Government's suggestion for closer links between teacher training and industry. "It is important that those who train teachers and those undergoing training have an adequate awareness of career opportunities in industry. We suggest that industry should play an important part by making more direct contact with colleges of education", the council states.

Professional bodies would be willing to participate in schemes designed to promote college-industry liaison, because it would help to strengthen the ability of teachers to give their pupils well-informed careers advice.

The council also suggests that there should be serious consideration to granting "sabbatical leave" for updating teachers' industrial experience and for closer links between schools and colleges of higher and further education.

In its report, the Institute of Mathematics and its Applications notes that there are professional bodies which have examining functions and which have been closely associated with the educational system for years.

"The advice of these bodies, including this institute, has always been freely available to the educational world and they ought to have a more clearly defined part to play in the dynamic process of consultation from which our schools should benefit", it states.



Sir Roy Marshall.

CVCP head moves off to Hull

Professor Sir Roy Marshall, the secretary-general of the Committee of Vice-Chancellors and Principals has been appointed vice-chancellor of the University of Hull.

Sir Roy, who was vice-chancellor of the University of the West Indies from 1969 to 1974, is expected to take up his post in October next year when Professor Stanley Denison retires.

Sir Roy, the son of a schooner skipper, was born in 1920 and educated at Harrison College and Pembroke College, Cambridge, where he read law. He was called to the Bar in 1947 and was subdean of the faculty of law at University College, London, from 1949-56. He was appointed professor and head of the department of law at Sheffield University in 1956 and was seconded to the University of Ife, Nigeria, for two years.

He is at present chairman of the Commonwealth Education Liaison Committee, a member of the Police Complaints Board, the Council of the Royal Postgraduate Medical School of London University and the Board of Governors of International Students' House.

Universities told not to play politics

by Peter David

A warning of the dangers that result from universities giving practical advice to politicians, given at the London School of Economics last week by Professor William Letwin.

In an inaugural lecture on the study of public policy Professor Letwin said that the intelligence of a university should be restricted to speculative rather than practical activity.

"I would assert, more particularly, that if a university were to transform itself into an agency improving the quality of public policies, it would surely ruin itself, betraying its proper character, and quite likely also worsen the performance of governments", he said.

Professor Letwin argued that academic education could provide prospective policy-makers with "forms of analysis appropriate to his practical work". These would provide a framework for systematic analysis, and history "a source of hazardous encountered when applying systematic analysis to the enormous complexity of the real world".

But it would be "arrogant" for academics to suppose that they could necessarily improve on the functioning of officials and politicians.

There were conclusive reasons why a university refraining from any comment on public policy, Professor Letwin said. "Universities need to live in a monastic seclusion. But there is a great difference between the members of a university, in a private capacity, becoming engaged in political activity, provided that engagement is strictly severed from their activities as teachers and scholars and the university as such engaging in political activity, or to the extent of giving advice.

"When a university gives advice in its corporate capacity, it always advises a function which universities cannot carry out without jeopardising the work of learning and teaching of which they are alone the custodians."

Change 16-19 age awards system AMA proposes

Positive measures to promote new educational opportunities for 16 to 19 year olds and reduce unemployment were submitted this week to the TUC and the Commons Social Services and Employment sub-committee by the Association of Metropolitan Authorities' education committee.

Mr Peter Horton, chairman of the education committee, urged a reorganization of the present system of awards and grants in a discussion paper. He believed that if more funding was available for discretionary awards then more places in further education would be taken up, thereby easing the pressure on the job market.

In view of this he said an appropriate element for expansion in discretionary awards should be incorporated into the Rate Support Grant relevant expenditure.

He suggests studying the payment of a flat rate allowance of less than £13 per week or the adoption of the Scottish system of discretionary awards. The cost of such schemes would be offset by savings in welfare benefits.

"Of course any solution will cost money. But so does paying benefits to young people to do nothing. It is estimated that it costs the country £60 in benefits and administration for every adult out of work," Mr Horton pointed out. "While the financial cost where young people are concerned may not be so high, the social costs of failing to meet their needs could be far greater".

In addition, he would like to see part-time education provided for all young workers at the rate of one day per week part-time education per cent now in full-time work. This would release five to six per cent more jobs for the unemployed.

Another step would be to extend the Youth Opportunities Programme to allow for a greater number of young people to move from one scheme to another, if they had not found employment, again without a proportionate increase in cost.

Inter-college networks to cut waste of provision urged

by Patricia Santinelli

Networks to bring schools, colleges and other institutions together should be set up to reduce the present tremendous waste in provision, Mr Geoffrey Holland warned this week.

Mr Holland, director of special programmes for the Manpower Services Commission, was giving his personal view of "Education and Work" at the first of four conferences on this topic sponsored by the Schools Broadcasting Council and the Further Education Advisory Council.

If any outsider came from Mars or Germany, he would be surprised at the range and number of provisions funded entirely out of the public purse, none being fully used, nor relating to each other", Mr Holland said.

The education service had to realize that the present world of work was unstable, which ought to be reflected in what it offered.

The BBC took the opportunity to introduce the first in a series of programmes for young trainees technicians devised in collaboration with the Technician Education Council. The series, "Tecair Lad", is designed for first and second year apprentices in colleges of further education and the first programme went on the air yesterday.

The films show all the procedures taking place in a factory modelled on lines. It is hoped that as a result young apprentices will be better able to understand the whole process, rather than just the particular aspect in which they are involved. Resources kits to go with the films are available from the BBC.

A similar series is being planned in collaboration with the Industrial Education Council to go out in the Autumn. It will consist of a series of 10 case studies designed to help business education students understand the kind of problem arising in companies, and understand the differences of operation between the private and public sector.

They will all emphasize the practical areas of knowledge and understanding which the BBC believes are necessary right across the business world and will incorporate an assignment to be completed by students.

The BBC believe that the series will not only help students but will be of assistance to those teachers who are still finding the changes to BEC courses confusing.

New library group

The Library and Information Research Group was launched this week at City University. It has two principal aims: to assist in bringing together those concerned with all types of research in library information and related areas, and to promote professional application and development; second, to provide a forum for consideration of matters of professional interest.

It intends to carry out its aims through workshops, symposia, conferences, individual referral and publication. Membership is open to anyone with an interest in library and information research and its applications.

£2,450 student

The cost of keeping a student at university last academic year reached £2,450, more than £700 above the cost of a polytechnic student, Mr Gordon Oakes, Minister of State overseeing higher education, has said.

In a written Commons reply to Mr Anthony Kershaw, MP for Stroud, the minister also said that the average institutional recurrent cost of a student attending a polytechnic in 1976-77 was £2,040 and at other major further education establishments £1,140. The overall figures were overall average costs which represented a wide range of differences between individual universities and colleges.

Tough DES guidelines on help in hardship

by Peter David

Tough conditions to local education authorities on when they should waive tuition fees in cases of student hard-ship are contained in a Department of Education and Science circular due to be issued shortly.

Preparation of the circular follows nearly a year of discussion between the DES, the local authorities and the government's audit inspectorate in a bid to sort out the confusion caused by the sudden jump in fee levels in the 1977-78 academic year.

At that time DES advice to LEAs and colleges was to "consider sympathetically exceptional cases of hardship" arising from the fee increase, which in degree level work was from £150 to £500. Many authorities, however, remained uncertain about how they ought to decide individual cases of hardship.

Authorities were also unclear about the predicament of students from outside their own boundaries. The Inner London Education Authority, in a controversial ruling, said that it could not afford to waive the fees of "out-county" student in addition to paying their rates.

The new DES circular is expected to say that fee waivers should be restricted to students on advanced courses and only those who had started courses before the 1977-78 fee increase. The "real" smaller increase, it is said to keep pace with inflation, will not be counted as a factor in cases of student hard-ship.

Overseas students facing definite hard-ship will be able to have their fees waived by their college or maintaining authority only after they have sought help from their home governments, the British government, or agencies, such as the British Council. In all cases, fees will be waived only in cases of personal hardship, and not for whole cohorts of students.

One glimmer of light in the new circular for students in hardship is an agreement to pool the costs of fee remissions, among local authorities. This might encourage individual LEAs to adopt more open-handed policies, but they will have to satisfy district auditors that their remission policies are "reasonable".

Forces of the right focus on NUS

The National Union of Students (NUS) motion for freedom from trade union membership, which was carried by the Conservative dominated Greater London Council last week, could not in fact be recorded at the council's behest.

But Mr Peter Ainsley, the union's deputy president, the week, demand "SAFE immediate action" on student unions. "It is one thing for a student to question within a union how it money is being spent. It is quite another for a student to allow himself to be used as a tool for an external group hostile to the whole idea of union", he said.

The NAFF campaign is unlikely to attract support from the growing Federation of Conservative Students. Its chairman, Mr David Wilks, is on record as opposing the idea of voluntary membership of student unions, and the FCS has followed a policy of full participation in the activities of the NUS.

Mr Winterton said this week that he had not yet reached a final decision on whether to sponsor a Bill on student union membership. But he was giving "serious consideration" to the introduction of a Bill to change the present system. "At the moment it is very much a closed shop. And whatever student unions do it is paid for in the main by the hard-pressed ratepayer and taxpayer", he said.



Mr Nicholas Winterton, MP—private Bill.

At Birmingham Polytechnic a law student, Mr Charles Macnamara, has been promised help from members of the Monday Club if he proceeds with a threat to take the union to court over a £400 donation to the firemen's strike fund last year.

The National Union of Students last December passed a resolution

AUT joins protest on copyright law change

by Judith Judd

The Association of University Teachers has joined the protest from universities against the Whitford proposals to change the law of copyright.

The proposals would jeopardize research and teaching and mean more expense for staff and students, the association says.

In the submission to the Department of Trade on the Whitford Report, the association agrees with the report's aim to simplify the law but it opposes plans for a blanket licensing system for photocopies.

In practice, the annual fee would be passed on to consumers. If universities had to pay an annual licence fee of 20 per cent, as in Germany, they would not be able to absorb the cost.

The association challenges the view that literary copying is seriously affecting subscriptions to learned journals. It points to the evidence of the Standing Conference of National and University Libraries to the Whitford Committee that there was little to suggest libraries were losing much income from copying.

While teachers and research workers want to protect their position as authors of articles, they often feel that their main interests is that their work should be widely known.

"For this reason many contributors do not seek any financial recompense for writing articles for specialized periodicals. In this respect, the articles they write are of benefit to the authors since they are used for assessment purposes for promotions to more senior posts. If they have to pay for the articles, it therefore follows that they will be doubly penalized."

The association believes that the existing arrangements for making single copies should continue in education.

It is also unhappy about some of the conclusions reached by the committee on the ownership of copyright. The committee said that copyright in work produced by an employee in the course of employment should be vested in the employer unless it was exploited "in a way that was not within the contemplation of employer and employee at the time of making the work".

The association is opposed to any change in the practice established in universities that the lecturer owns the copyright. "This view has been substantiated by case law".

Special praise for 'On the Move' as BBC wins award

by Maggie Richards

A major international award has been won by the BBC's educational broadcasting service, with the corporation's contribution to adult literacy through the "On the Move" television series being singled out for special praise.

BBC Educational Broadcasting shares the award, made by the Paris-based *Institut de la Vie*, with the American Children's Workshop.

At the presentation ceremony in Paris on Wednesday Mr Gerard Mansoll, deputy director of the BBC, collected the award, which carries a 250,000 fr prize. Also at the ceremony was Mr John Cain, BBC assistant controller of educational broadcasting.

It is the first time the BBC has won the award, which was first presented in the field of education in 1973 when the recipient was Jean Piaget. Awards are also made by the *Institut*, founded in 1960, for contributions to science and technology.

In awarding the prize to the BBC's educational broadcasting service, the international panel of jurors remarked on the corporation's involvement through "On the Move" in the adult literacy campaign.

The *Institut* also welcomed and acknowledged the success of the literacy campaign overall.

Some of the prize money, amounting to about £12,500 for the BBC, is likely to be set aside to continue studies on methods of assessing the effectiveness of broadcasting.

College changes needed 'to meet 16-19 challenge'

by Patricia Santinelli

Major changes in the management, structure and priorities of further education colleges would be needed to meet the challenge of 16-19 education Mr David Moore, principal of Nelson and Colne College, said yesterday.

Speaking at the Association of Colleges for Further and Higher Education's annual general meeting in London, he said: "If colleges are to make more flexible contributions, then some new methods of recognising the validity of research, evaluation, innovation of non-traditional teaching and learning methods must be found. At the moment the Burnham report gives too much weight both to advanced work and traditional methods."

He added that the present structure of colleges as dictated by Burnham could be inflexible and defensive. It might neither respond to work lower level students, nor encourage relevance to real needs, as opposed to registrations and the lure of advanced courses.

What was urgently needed before adopting any new proposals was a far more systematic and large scale study of the requirements of this age group than had previously been undertaken.

Mr Moore outlined ways in which colleges could make a new and added contribution towards 16 to 19 education. They could promote a change in teaching and learning methods to improve both the motivation of students and their ease of access to the system, as well as engage the interest of students alienated by traditional approaches.

Existing colleges could, with some changes of tactics and additional support, meet these needs if they cooperated with local industry, universities and national agencies.

Another contribution could be the use of the staff's expertise and experience to promote liaison between school and industry, by organizing the type of "education/work community councils" now being established in the United States.

Colleges' role should also involve a close scrutiny of the curriculum content of courses for normal further education students and those under the Youth Opportunities scheme to ensure that they remained relevant to current and future needs of the student, worker or young unemployed.

Mr Moore said there was no single curriculum formula to be developed and applied on a universal and indiscriminate basis to everyone regardless of individual characteristics. But perhaps we were looking for something which would produce several types and levels of personal competence and would involve traditional elements like vocational and general education but used in a different way.

Mr J. Chambers, an executive member of the National Union of Teachers and chairman of the working party on the education of the 14 to 19-year-olds, said that the curriculum content taught in colleges and schools should be evaluated or re-evaluated for contemporary human relevance and applicability to remove the "failure" syndrome it presently encouraged.

Finniston told not to change length of engineering degrees

There is no need to increase the length of the present three-year courses in engineering at universities, the Institution of Municipal Engineers has told the Finniston committee.

In a memorandum to the committee of inquiry into the engineering profession, the institution also rejects the proposal that universities and polytechnics should change their admission requirements to specify an A level in mathematics with any other subject. This retrograde step would expand the pool of potential applicants by 50 per cent and would be tackling the problem in the wrong way, it says.

While believing there is no need for an increase in the length of three-year degree courses in engineering, it adds: "However, it would be desirable for the first two years to concentrate on broad general principles. The third year would be more closely related to the needs of industry."

Although there is no shortage of high quality engineers seeking appointments with local authorities the institution believes that the profession is suffering because the most talented women are not interested in joining. Of the most able girls who enter the learned professions, only a very small proportion are interested in engineering.

The institution is particularly concerned at the effects of the Government's use of the public sector as a regulator of the general level of economic activity.

"The long time required to educate and train a chartered engineer must be appreciated", it states. "Such a long training period requires a stable background of employment opportunity which cannot be provided adequately when the economic regulator is used politically to control the public sector."

At present the institution, which has a membership of about 10,000 employed in the public sector, is carrying out a study of the current and future needs of municipal engineers in Britain.

The report is also critical of the use that is made of chartered engineers in industry.

A common register of all professional engineers in Britain would be highly desirable, it says.

Public beats private for Newcastle job-hunters

by Judith Judd

More graduates from Newcastle University gained jobs in the private sector last year and fewer in public service, according to the annual report of the Chief Careers Adviser, Mr C. Guy Slipper.

The report shows that 63 per cent of graduates went into industry, commerce and the professions, compared with 58 per cent in 1976; 13 per cent entered public service compared with 19 per cent the previous year. The report says: "In the private sector there were signs of increased confidence and it certainly received much public exhortation." However, it was not yet clear whether this would compensate for reductions in those going into the public service.

"It seems very unlikely that its total recruitment will have risen in proportion to any rise in economic activity. Too many employers were still overexamined and thus had plenty of slack to take up before running into manpower shortages."

The report points out that some employers are still short of graduates. In some cases there is a shortage of people with specific qualifications, especially in applied sciences. In others, employers are looking for personal qualities of a particular kind and are not prepared to lower their standards.

Though the total number employed in local government decreased, graduate recruitment was patchy. The most severe contraction was among trainees in such fields as librarianship, social and careers work. Civil engineers, architects and planners also had serious difficulties. The police failed to attract more, despite increased efforts.

For many students industry remained unattractive. "Students observe that there are greater risks in industrial careers than elsewhere and in 1976-77 they were aware that industry no longer had its previous freedom to compensate for those risks by offering comparatively high rewards."

The report suggests that the CBI, the unions and the Department of Education and Science might get together to arrange real work with realistic pay for graduates during holidays so that they might get a more balanced view of industry.

The picture overall was encouraging: graduates were still in steady demand. The fact remains, however, that there are still some unemployed new graduates despite some employers having unfilled vacancies; and that most employers report a considerable increase in the number numbers of applications."

Another employment report from Manchester University shows that only about 8 per cent of its graduates are still in temporary employment or looking for a job, compared with 9 per cent last year.

Qualified graduates were in short supply in mechanical and electrical engineering and in the teaching of mathematics and physics. In architecture, town and country planning and the civil service, graduates had had to adjust to changes in recruitment levels.

Go to grass roots researchers urged

There is a serious lack of research into developing amenity grasslands in Britain, the Natural Environment Research Council has warned.

In a report, "Amenity Grasslands—the Needs for Research", the council has revealed that despite the national recreational value of these areas only £200,000 is spent each year on research and only a fraction of this is directly relevant to amenity grass. The figure compares with the £150m used to maintain the country's urban parks, school playing fields and golf courses. Local government pays almost half of the maintenance bill and mowing alone accounts for 60 per cent of costs.

"If five per cent of mowing costs could be saved by research and its application in practice £4m could be saved or made available to improve the grassland in other ways", the council states.

The report emphasized that much research is needed into mowing and other ways of controlling grass growth, the development of better varieties of grass, drainage and renovation, and the biological processes underlying turf wear.

Antipodean medical exchange set up

Two new travel schemes worth £100,000 have been launched to boost the exchange of medical research workers between Britain and New Zealand and Australia.

The Wellcome Trustees have set aside £30,000 for the exchange scheme with Australia, and the Ramaciotti Foundations in Sydney have contributed a similar sum. The New Zealand scheme is being given a £20,000 grant from the country's Medical Research Council, and a further £20,000 from the Wellcome Trust.

The projects have been launched because the sponsors consider that the strong past associations between the two countries have weakened to the disadvantage of medical research. The awards are for visits of a maximum of three months and will enable research workers to exchange views or study new research techniques. The grants will also allow departments to invite medical scientists from the other countries to participate in research programmes.

Polys 'not given enough support'

Polytechnics have not received the whole-hearted support they had a right to expect when they were created, according to Dr Harry Law, director of Preston Polytechnic.

In a sometimes bitter report of the polytechnic's progress during the 1976-77 academic session, Dr Law criticizes the government's apparent assumption that demand for higher education will automatically drop with the birth rate.

He says: "The demand for higher education is not bottomless and I am not arguing for a massive and disproportionate injection of funds. What I am suggesting is that the policy of creating 30 polytechnics should be seen through.

"Few of the polytechnics have received the whole-hearted support they had a right to expect when they were created. Preston certainly has not, in spite of the efforts of the local authority. Of course the government should invest in the 16-19 age group where there is the need, but it should also remember that 16-19 year olds have the habit of becoming 18-24 year olds."

Dr Law attacks the government's "unbelievable" decision to end initial teacher training at the polytechnic.

OU's Dey has come

A new director has been appointed for the London regional office of the Open University—the largest in the country. Dr Ian Dey will take up his new post in October, on the retirement of the present director Dr Kenneth Urwin.

Dr Dey, aged 40, is at present deputy regional director of the Open University's Newcastle office.



A new comedy, Angst for the Memory, opened at Essex University Theatre this week. Written by Geoff Nicholson, an MA drama student, this one-act play about absentmindedness features MA student Lindy Scholey and Richard Stewart, a chemistry lecturer at the university. It will tour London pubs and theatre workshops during the Easter vacation.

Gould lecture off

Professor Julius Gould, author of the anti-marxist tract *The Attack on Higher Education*, this week withdrew from a controversial speaking engagement at the Polytechnic of North London.

Professor Gould, who was a member of a team of visitors from the Council for National Academic Awards visiting the polytechnic this week, decided not to give a planned lecture entitled "Freedom—for what?".

A polytechnic spokesman said that the lecture had been cancelled because the "tight schedule" of the CNAA visit would have prevented Professor Gould from giving the lecture.

Birth of poly grants committee

These extracts are taken from the Oakes committee report, due to be signed by the members this week

Conclusions and summary of recommendations

Education has been described as a national service locally administered. Its national character is nowhere more marked than in higher education. This is reflected in our recommendation for a national body charged with advising on the total resources to be made available for maintained higher education and for effectively determining the allocation of national funds between authorities and institutions. It should be seen as a body exercising considerable authority.

At the same time, our recommendations reflect our desire to see a large measure of responsibility and initiative at local level. There are therefore important limits to the powers of the national body. It could neither require nor forbid an institution or authority to make any higher education provision or to incur any particular expenditure. Its influence will derive from its responsibility for allocating the funds which local authorities provide collectively and for overseeing their effective use.

We regard our recommendation that individual maintaining authorities should directly meet part of the cost of the higher education they provide as an essential corollary to the responsibility they would exercise. It is not merely a financial incentive to prudent management but the counterpart of the degree of freedom from absolute central control which we think is essential to the welfare of the maintained system.

Our recommendations as to how management functions at the local level should be discharged reflect this same concern to ensure that management and financial responsibilities are delegated not only to local authorities but also downwards to governing bodies, principals, heads of department and other staff. Our recommendations for the carrying forward of savings are put forward not only as an incentive to prudent management but because we believe that initiative and responsibility at any level can only be fostered if there is some source of funds, however small, within the control of management at that level.

Our recommendations for new Regional Advisory Councils envisage that they should be financed by their member authorities. This reflects our view that they should not be regarded as regional branches of the national body but as bodies established by local education authorities in a region to enable them better to discharge their own functions. Their responsibility will be to their parent authorities to whom their advice will normally be directed.

Throughout our discussions we have kept much in mind the existence of an important direct grant sector of higher education. This has a long history of close working with local education authorities. We wish this to continue and we would regret it if one outcome of our recommendations for better management of the maintained sector were to leave direct grant institutions with a sense of isolation. But it is not within our terms of reference to make recommendations in relation to them, and we have refrained from so doing. We believe however that if it were the wish of the providing bodies that they should be either associated with or come within the system of national management we propose there would be a ready response from the maintained side. We hope then the Secretary of State will canvass the possibilities of such steps in the consultations which she has undertaken to make on our report.

We believe that our recommendations for better management will benefit both the availability and quality of maintained higher education. Our assumption has been that mandatory will continue to be a matter for academic boards, validating bodies and professional institutions. But we recognise that standards are intimately linked to management and financial decisions. Our proposals for the composition of the National Body reflect our concern with the maintenance of standards. We believe that because of this, and because the councils of validating bodies also include representatives from the local education authority world, there is no need to fear that the actions of the national body in promoting proper economy will be threatening to educational quality. Where necessary the body should stand ready to enter into discussion with validating bodies about standards.

We have placed much emphasis on the need for higher education to be adaptable to the changes which we expect may be required of it in the period up to the end of the century. The terms and conditions of service of academic and other staff will need to reflect this and we hope that the bodies responsible for negotiating them will keep this in view.

The system of management of higher education in the maintained sector should reflect a partnership between national and local levels.

The DES should be represented at meetings by assessors.

The funds under the control of the national body should be provided by local authorities collectively through a pool. They should meet the major part of the cost of providing higher education in the maintained sector. Individual maintaining authorities should, however, be responsible for meeting directly 15 per cent of the costs of their higher education provision; this direct local contribution should be introduced at a level of 5 per cent and increased by annual stages to 15 per cent, with provision for a review before going beyond 10 per cent.

The Pooling Committee should be invited to study alternative formulae for determining contributions to the pool and possible ad hoc adjustments designed to mitigate difficulties arising from the introduction of local contributions.

The national body's remit should extend to all forms of maintained higher education and it will have to develop a variety of administrative and financial mechanisms appropriate to varying types of institution and provision. We have considered certain possibilities but the body should be free to make the final choice, in consultation with the local authority associations and other interested organizations.

Local

Individual maintaining authorities should retain overall responsibility for the good management of institutions under their control. Subject to this, institutions should be granted the maximum freedom to manage their own affairs.

The governing body of an institution should provide a clear locus of authority and accountability. In particular it should have prime responsibility for determining staff establishments; it should in general be free to make its own arrangements regarding salaries and contracts; its ultimate responsibility to its maintaining authority for all expenditure incurred by the institution should be clearly recognized.

If a governing body fails to fulfil its responsibilities, its maintaining authority should be empowered to dissolve it and, in collaboration with the national body, to perform its functions pending reconstitution.

The constitution and *modus operandi* of the governing body should ensure continuity of membership among non-staff members to enable them to acquire an adequate understanding of the institution's work.

The national body should have a general responsibility for improving the management of maintained higher education as a whole. In addition to preparing advice on Articles of Government, it should promote further consideration of the extent to which governing bodies can be given greater authority in establishment matters, and the preparation of model financial regulations for adoption by L.e.a.s.

Further consideration should be given in the appropriate quarters to the responsibility of governing bodies for approving student union rules and to the provisions of the Burnham FE Document affecting the management structure of institutions.

A National Body should be established with the following terms of reference : "To collect, analyse and present, where appropriate in conjunction with the Department of Education and Science and the University Grants Committee, information affecting the demand for and supply of higher education in the maintained sector ; to advise the Secretary of State and the local authority associations on the total provision which should be made for it ; to consider and issue guidance on the programmes and estimates submitted to it by authorities and, where appropriate, institutions ; to allocate funds for recurrent expenditure and to advise on the allocation of capital expenditure ; and to have general oversight of the development of maintained higher education and its cost-effectiveness.

Regional

Nine Regional Advisory Councils should be established in England, with responsibility for considering, promoting, monitoring and advising on the planning, coordination and development in the regions of higher education in the public sector, including initial, induction and in-service training of teachers. Universities in each region should be invited to cooperate with these new councils and to be represented on them.

The councils should be set up by Trust Deeds, requiring the establishment of a governing body, together with two main sub-committees to deal with higher education, including initial teacher education and the induction and in-service training of teachers.

Initially, the boundaries of each region should be those of the existing RACs; modifications of these boundaries, where necessary, and arrangements for membership in areas of overlap should be the subject of negotiation between the councils as soon as they are established.

Each council should have a governing body composed of three broadly equal groups, comprising representatives of the local education authorities in the region; representatives of staff and management in the institutions and ; others, including representatives of commerce and industry, schools and the universities.

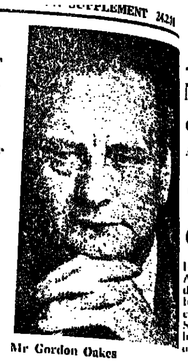
Members of Her Majesty's Inspectorate should attend meetings of the councils as assessors.

The constitution of the governing body of each council should be subject to the approval of the Secretary of State.

The budget of each council should be met from the funds of the constituent local authorities.

Wales

The application of the recommendations in this report to Wales should be considered further in relation to the timing of devolution.



Mr Gordon Oakes

Proposals for legislation

The present statutory basis for pooling the cost of maintained sector higher education is contained in Schedule 2 to the Local Government Act 1974. It only permits the pooling of the total cost of fresh legislation would be required to authorize the system of pooling recommended in this report. Under our proposals individual local authorities would remain responsible for determining the level of all level of expenditure in the institutions (except where they are passed to direct control by a national body). The body, for its part, would negotiate and agree with each local authority the level of contribution for which it would look to funds provided collectively by the authorities through a model pool.

We have not been able to consider fully the legal aspects of such an arrangement. The department has, however, advised us that on the understanding that the proposed arrangements for a modified pool would continue to operate within the Rate Support Grant system, it would not be possible to give to national body formal executive responsibility for authorizing the selection and subsequent allocation of pooled funds by way of adjustment in the payment of the needs element of RSG. As is the case with the present pooling arrangements that would have to remain the responsibility of the Secretary of State. The legislation could however require the Secretary of State, in exercising this responsibility, to have regard to the advice of the national body, so effectively safeguarding its responsibility. We believe that this would be a satisfactory solution, and we note, in passing, that it would simplify the operation of the reserve procedure.

We recommend that the DES consult further with the other departments concerned and the local authority associations about the extent of the legislation which may be necessary on this and other matters.

The Government are in any case committed to wide ranging consultations on our recommendation. It seems unlikely that this process could be completed in time for legislation to be enacted in the present Parliament. We are, however, anxious to see an early start on the implementation of our recommendations.

In particular, we hope that ways and means can be found to make it possible to take further some of the matters which we have recommended need further consideration: the basis on which contributions to the higher education pool are assessed; the extent to which governing bodies can be given greater authority in establishing matters; the preparation of model financial regulations for adoption by L.e.a.s; the preparation of advice on Articles of Government.

The establishment of new Regional Advisory Councils is for our view a matter of some urgency and it may be desirable to take the necessary steps in advance of decisions on our other recommendations.

Finally, we recommend that as soon as the Government is in a position, following the consultation process, to take decisions on our recommendations as a whole, they should in the light of the prospective Parliamentary timetable consider whether the national body recommend should be established on a shadow basis to undertake preparatory work pending the enactment of legislation.

Constitution, composition and staffing

The arrangements we propose will entrust the national body with an important executive task. It will need an independent chairman who is prepared to devote at least a substantial part of his time to its duties, and it might be better particularly in the earlier years if he were full time.

The national body must be sufficiently small to enable it to carry out its task effectively. We think therefore that it should not have more than 25 to 30 members. Within this compass it must include elected members and officers from the local authority world, persons from the management and staff of the higher education institutions they maintain, independent academics and members from schools and the world of employment. It will need to be seen to be widely representative ; on the other hand, if it is to develop a corporate identity its members must be free to form their own judgments and should serve in a personal capacity.

A body so constituted would be tripartite, consisting of approximately equal numbers from local authorities, institutions and elsewhere. About half of its members would be nominated by individual organizations and about half by the Secretary of State. We recommend that she should consult widely before deciding on her nominations.

Our proposal for the number of members to be nominated by the local authority associations is designed to provide eight members from England and a ninth member from Wales, should the body have responsibility for Welsh higher education.

National

The National Body should be composed as follows :	
Independent Chairman	1
Local Authority Members (to be nominated by the local authority associations)	8- 9
Institutional Interests (To be nominated by NATFHE	8
CDP	3
The Secretary of State	2
Others (to be nominated by the Secretary of State)	3
	8-10
	25-28

Our recommendation that three institutional members should be nominated by the Secretary of State reflects the fact that a considerable number of organizations besides the CDP and NATFHE have some claim to be represented. Such claims would be ruled out by the limited number of places available and we would expect the Secretary of State to select her three nominees on their merits from suggestions put forward by all those concerned, including, if they so wished, NATFHE and CDP also. Care should be taken to ensure that within the total of eight institutional members there is at least one principal of a non-polytechnic institution substantially involved in higher education.

The third element of members nominated by the Secretary of State will have *inter alia*, to remedy any gaps in experience or knowledge which may be left by other nominations ; on some occasions for this purpose (for example, to ensure the availability of adequate financial expertise) or to provide a good geographical balance one or two of her nominees might best be persons from local authorities or institutions. Some representation of direct grant institutions would, in any case, be desirable, and this might need to be strengthened if the function of the national body were in due course to be extended to some such institutions. For these reasons we have felt it desirable to recommend that the Secretary of State should have some discretion in the number of members she might nominate.

Our local authority members have represented to us that local authorities, being responsible for the provision of maintained higher education and for meeting a substantial part of its cost, will be in a special position in relation to the national body. We accept the force of this argument but think that it would be helpful to the good working of the body if local authority membership were not increased to an extent which would give them a dominating voice. We think it better to preserve the tri-partite composition we have recommended above and to safeguard the position of the local authorities in another way. We recommend therefore that if the local authority members are on any occasion united in relation to a particular matter under consideration and find themselves in a minority they should, if they so wish, be able to require that the national body should refrain from a decision and instead refer the matter to the Secretary of State to decide in consultation with the local authority associations. This procedure would only be operative if brought into effect by unanimity among the local authority members present.

The Secretary of State and organisations nominating members should be able to nominate a strictly limited number of persons who would be appointed by the Secretary of State as alternates, and would receive all papers of the body.

The national body will require staff adequate in number and calibre to carry out its substantial responsibilities. We recommend that they should be employed by the body itself which, if necessary, should be a body corporate. In practice, we would expect most to be recruited (eg, on secondment) from the department, local authorities and individual institutions.

North American news

Clive Cookson, North American correspondent reports from the annual conference of the American Association for the Advancement of Science held in Washington

Concern over 'decline' of campus science

Is the quality of research in American universities beginning to deteriorate? Should the country's basic research effort continue to concentrate in its universities? Should it can the United States be a world leader in every field of scientific inquiry?

Questions such as these dominated the symposium on the state of academic science at this year's annual meeting of the American Association for the Advancement of Science (AAAS) in Washington.

The basis of the discussion was a report on the current condition of science in American universities, commissioned by the National Science Foundation (NSF) and conducted by two political scientists, Professor Bruce Smith of Columbia and Dr Joseph Karlesky of Franklin and Marshall College. (The second volume of their report is published this month.)

Their inquiries revealed "the beginning signs of deterioration", said Professor Smith. The signs were subtle—morale had not broken down in any section of American science—and the damage so far was concentrated in those "institutions that aspire to be national centres of science but are not of the highest rank.".

The most prestigious departments show continuing virality and many are attracting an increasing share of graduate students and research grants. "Less highly ranked departments have generally experienced serious difficulties of recent years. The serious issue is whether the quality of the leading science departments will also erode in the future", said Professor Smith.

Another warning sign identified by Smith and Karlesky was a tendency for investigators to favour "safe" research projects at the expense of the most inventive lines of inquiry.

Dr Karlesky singled out two particular problems affecting academic science: the squeeze on funds for laboratory and research equipment and the difficulties experienced by young scientists trying to break into the system.

The proportion of funds from the United States' two big research-granting agencies, the NSF and the National Institutes of Health (NIH), allocated for permanent laboratory equipment fell from 12 per cent to 7 per cent between 1968 and 1975.

The decline in the number of young scientists was illustrated by a NSF study of 59 physics departments, showing that the proportion of faculty members within six years of their doctorate fell from 40 per cent in 1968 to 18 per cent in 1975.

But the young researchers who do find academic posts are on average having as much success with their grant applications as their counterparts in the late 1960s, while experienced investigators are far more likely to be turned down now than 10 years ago.

Later in the symposium Professor Harvey Brooks, Benjamin Pierce professor of technology and public policy at Harvard University, commented that the Smith-Karlesky data on young scientists showed how well the peer review system for research proposals was working.

Because competition for academic jobs was so much more intense today, those who made it were of higher average quality; therefore their research proposals tended to be better and, through the peer review mechanism, they got a larger share of the grants.

Professor Carl Kaysen, of Massachusetts Institute of Technology (and vice-chairman of the Sloan Commission on Higher Education), suggested that the information collected by Smith and Karlesky and others could also show how well the American scientific system had adapted to an era of slow/no growth.

He criticized the notion that American science should or could be first in everything—an attitude he said was exemplified by Dr Robert Wilson, director of the Fermi National Accelerator Laboratory, near Chicago, who has just resigned in protest at the United States Government's refusal to give Fermilab an additional $30m for a project to double the atom smasher's energy.

For the first time since the Second World War American physicists were seeing the best experiments going on in Europe, said Professor Kaysen. The 12-nation European Accelerator Centre CERN outside Geneva, and the German Petra project near Hamburg were two years ahead of their American counterparts.

Independent research units questioned

The mysterious world of the ORU—characterized as "the soft underbelly of the academic system" by a senior Berkeley administrator—was explored during the symposium on the state of academic science.

An ORU, in American socio-academic jargon, is short for an Organized Research Unit—a research institute or laboratory within a university but outside its academic departmental structure.

According to Professor Albert Teich of George Washington University, who presented some preliminary conclusions from an investigation of ORUs which he is currently carrying out with National Science Foundation (NSF) support, remarkably little is known about these organizations and the full-time researchers who staff them.

Nor, he maintained, had educators and science policy-makers given serious thought to the impact on American universities of a further increase in the number of ORUs, which is widely expected.

New professions, especially paramedical ones like occupational therapists, even art therapists, frequently come under state regulations in the same way—at least 25 separate licensed professions exist in the health field

Tradesmen, too, such as electricians, car mechanics and beauty salon operators, have to be licensed in many states. In all there are thought to be 1,500 state licensing boards in the United States.

The method of examination is always the same : the multiple choice test. The questions are normally related to the profession, or, in testing jargon, are "content valid"—an intending estate agent will be asked about the workings of the property market, for example.

But Dr Pottinger argues that this relevance is an illusion. "The tests may be 'content valid' but the skills required to take the test are rarely the skills required to do the work. The world doesn't present itself in a multiple choice format."

He maintains, too, that, however much the "testing industry" may argue that their product is not culturally based, they cannot get away from the fact that the family background and inferior schooling of minority groups makes them less good at doing tests, whatever their content.

The new centre will be funded initially by the W. A. Rooney Foundation, a midwestern charitable trust. Mr J. Patrick Rooney, who runs the foundation, is an insurance executive with a strong belief in equal rights for minorities. He met Dr Pottinger when the latter testified for him in a lawsuit against the Commissioner of Insurance for Illinois and the Educational Testing Service (ETS).

Mr Rooney sued after the state awarded a contract to ETS, the United States' biggest testing organization, to develop a proficiency test for licensing insurance agents. Dr Pottinger testified for him that the proposed test did not measure skills necessary for a career in insurance.

The court awarded Mr Rooney an injunction stopping the testing on the grounds that there was no statutory authority for it, but Dr Pottinger says ETS and others then lobbied the legislature to pass a Bill that allowed the tests to go ahead.

The two men decided to set up the centre as a national focus for attempts to find better ways to ensure the competence of professionals and at the same time "foster the protection of individuals from undue and arbitrary restraints on job acquisition and job mobility."

Dr Pottinger insists that he is not setting himself up as an adversary of the professions or the state bodies that regulate them—he just wants to help them improve their practices. "Our intention here at the centre is to position ourselves as a neutral nexus for information acquisition and dissemination", he says.

However, he clearly feels that much of the testing industry is beyond reform—that the big test manufacturers like ETS are interested only in developing and selling multiple choice tests and have too big a stake in the existing testing systems to be prepared to change them.

If its plans come to fruition, the centre will carry out its role in four ways : provide information for professional and trade associations, for federal and state governments, for licensing boards and for legislators by means of a regular newsletter and circulars ; give these bodies technical assistance through seminars and training sessions ; carry out research and policy studies on the effect of licensing arrangements on manpower ; and act as a clearing house for information about licensing procedures and criteria, and new ways of measuring professional competence.

In the long run Dr Pottinger would like to see the United States move right away from the present system of licensing entrants to a profession towards one of registration and rigorous on-the-job monitoring.

The existing arrangements, he argues, let people in on the basis of their ability to pass tests. Once they are in it is impossible to get them out again except for outrageous acts of misconduct.

Over the past decade a lot of the pressure on states to introduce licensing arrangements has certainly come from the professions themselves. They realize that licensing will enhance their status and their incomes.

But consumer groups have played a part, too, under the illusion that licensing necessarily protects the public from dangerous or incompetent professionals.

Many American licensing boards are composed entirely of representatives of the profession or trade being licensed, though 29 states do require consumer representation on at least some boards. It is frequently alleged that the consumer voice is an ineffective one, even when it is heard.

Changing from today's licensing arrangements to a new system of regulation and efficient monitoring of performance will take 10 to 20 years, Dr Pottinger estimates.

● The ETS annual report for 1977, which has just been released, contains a set of "principles, policies and procedural guidelines". They have been designed, the organization says, "to ensure that ETS products conform to uniformly high standards with respect to six areas of basic importance : accountability, confidentiality, product accuracy and timeliness, research and development, tests and measurement, and advisory and instructional services".

"The guidelines represent the first comprehensive effort by ETS to collect and publish standards believed to be desirable in the evaluation of our products and services", said ETS President, Mr William C. Turnbull. They were worked out over two years of "self-study" involving 150 of ETS's 2,000 staff.

The annual report says ETS continued its affirmative action programme to recruit employees from minority races : 8.3 per cent of the organization's "officials and managers" and 7.6 per cent of "professionals" belong to racial minorities (as do 6.3 per cent of service workers). Total revenue for 1977 was $70m. ETS is a non-profit-making organization.

Aims may be the same, but the style is unlike that of the BA

The theme of the 1978 meeting of the American Association for the Advancement of Science was "Science and Technology : New Tools, New Dimensions". The 900 lectures and 140 symposia took full opportunity of the general nature of the conference's title.

The week-long meeting, held this year in Washington DC, makes an intriguing, if predictable, contrast to the annual meetings of the British Association for the Advancement of Science (BA).

Although the American gatherings are more than twice the size, both in terms of attendance (7,000 this year) and of the number of speakers, the two conferences constitute the biggest and best published general scientific meetings in their respective countries. They share roughly equivalent aims and programme content, and neither is any longer an occasion at which scientists think of announcing major breakthroughs. There the similarities more or less end.

The different venues alone ensure completely different atmospheres. The BA meeting is always held on a university campus, the AAAS in one or more huge and impersonal hotels (which makes it feel like any large American convention).

The British occasion retains an air of genteel, Victorian, amateur enthusiasm, which is emphasized by the presence of a still substantial corps of elderly scientific ladies who faithfully attend every annual meeting, and many hundreds of eager schoolchildren and teachers.

AAAS meetings are completely dominated by professional scientists and social scientists, of whom about 60 per cent work in universities and most of the remainder in government and industry.

Both British and American associations retain their traditional division into sections identified by a letter of the alphabet. The BA has 16 sections and the AAAS 21.

But BA meetings are still arranged around the individual sections, and this sometimes gives an unfortunate impression of fragmentation and duplication (though a few interdisciplinary symposia are now being introduced into the BA programme).

The AAAS meetings are divided into broad themes—for example, "Climate and Land Use" or "Methodology of Science"—to which several sections contribute.

Both represent the one week in the year when science can be sure of nationwide coverage on television and radio and in the newspapers. The American meeting often attracts more than a thousand reporters and the AAAS provides lavish facilities for them, including five or six press conferences a day. These briefings can turn into lively seminars in their own right.

Which occasion does more to advance science in its national context is debatable. Perhaps the remarks of an unnamed participant at the AAAS meeting, quoted in *The Washington Post*, could apply to both countries : "No one brings in anything new to these annual orgy trips. It's just a lot of hoopla for you reporters."

Bulgarian agreement

Bulgaria and the United States have signed their first agreement on scientific and technological cooperation. It provides for three main areas of activity: cooperative research projects, scientific visits and small joint seminars.

Lower blood pressure

High blood pressure is 40 per cent less prevalent in college graduates than in people who had less than 10 years' schooling, according to a national survey published in the American *Journal of Epidemiology*.

Australia

Vcs' chairman warns of cuts in expatriate jobs

from John Kirkaldy

SYDNEY

A year of standstill is Professor Rupert Myers' prediction for Australian universities at the start of the academic year. Professor Myers is in a good position to judge: he is chairman of the Australian Vice-Chancellors' Committee and vice-chancellor of the University of New South Wales, the country's largest university.

Professor Myers also believes that in the next five years staff recruitment from abroad may either be restricted or abandoned; that overall numbers of students at universities may soon decline; that there will be a growing unionization among university non-teaching staff; and that funding for universities may become a state rather than a federal concern.

Professor Myers argues that the tighter job situation may well put pressures on the universities to cut back on overseas appointments, although "it is probable and desirable that Australia will continue to advertise abroad for its more senior positions".

His prediction, if proved correct, would obviously have major implications for British academics, a traditional source of recruitment for Australian universities. The higher salaries and better standard of living of Australian academics have proved very enticing. (At present, an Australian professor earns A$31,248 (£18,167) and a lecturer A$14,851 to A$19,551).

Non-teaching staff will become more unionized in an effort to combat economic pressures, Professor Myers says. This, he believes, will probably be on a state rather than a federal basis.

He dismisses teaching staff associations' allegations that universities have increasingly used fixed-term appointments to combat decreases in funding (*THES*, January 13). "Most staff will always be tenured but universities must have a degree of flexibility to protect themselves and to meet changes and new demands", he says.

There will be a trend, he predicts, in the next few years away from highly specialized courses into more general degrees. Like most Australian academics, Professor Myers keenly awaits the report of the committee investigating education and training under the chairmanship of Professor Bruce Williams, the vice-chancellor of Sydney University. The report is expected later this year.

In a way, Professor Myers' own career is symbolic of the changes in Australian universities in the past 30 years. When he was appointed professor of metallurgy at the University of New South Wales in 1952, there were five other professors, 60 members of staff and 300 students. Today the university (founded in 1949) has 18,000 students and 4,000 staff, a community larger than most Australian country towns.

As in Britain, the 1950s and 1960s were boom years in tertiary education, although this period lasted a little longer in Australia with new universities opening in the past two years in Brisbane (Griffith), Perth (Murdoch) and Belconnen (Canberra), Wollongong (Wollongong) and Bundoora (La Trobe) in Melbourne, and Victoria (Deakin). Professor Myers thinks it unlikely that another university will be built in the next decade, although plans for a Defence College have already been announced.



Professor Myers: more economic pressures

After the standstill, Professor Myers contends, will come "reappraisal". He does not believe that universities should lose their separate identity as some members of the colleges of advanced education would wish. (Last year, however, the Universities and Advanced Education Commissions, which allocate funding priorities, did merge to form the Tertiary Education Commission.) He thinks that universities have a separate function, particularly in research. He rejects, however, the term "elite" as educationally loaded.

Australian universities remain dominated by the British and American experience and the American influence is increasing. Professor Myers argues that the Australian element is also becoming more important.

"Australia has problems and features of its own", he says, citing the country's highly concentrated urban population, which make universities like UNSW take a high proportion of their students from a very localized area. "The biggest day to day problem of an Australian vice-chancellor is parking", he says wryly.

There is a possibility, he believes, that the financing will become more decentralized. University funds may be allocated by [illegible] than the federal government, as at present. The [illegible] likely to [illegible] other levels of education, he thinks.

On the controversial issue of funds from student unions going to political causes (*THES*, January 6), Professor Myers reads warily. He believes that students do have a right to allocate funds for student welfare in the broadest sense but feels that there has been "misdirection" in the past.

South Africa

Universities to get 10% less

from Martin Feinstein

CAPE TOWN

A blanker 10 per cent cut in government subsidies may force universities to lessen support for such activities as adult education. The cut is 4 per cent larger than last year's, and will reduce the total government grant to white universities by at least 16m rand (about £10m).

Although the Department of National Education has told individual universities the size of the 1978 grants, the figures are still subject to parliamentary amendments. They could be reduced still further.

Hardest hit will be the smaller residential universities, which have lost out in the application of the van Wyk de Vries subsidy formula, a "sliding scale" the government uses to calculate academic salaries, library and administration grants.

Although the formula requires large universities, such as Johannesburg's Rand Afrikaans University, to finance up to 20 per cent of their expenditure—as compared to 10 per cent for smaller universities—the smaller campuses have fewer ties with industry and less outside aid for research.

The chairman of the Committee of University Principals, Dr Derek Hendrikson, who is vice-chancellor of Rhodes University, said that universities, faced with a limit on student fee increases and disappointing prospects for funding from the private sector, will have no choice but to reduce costs and increase overall efficiency.

Most universities will continue their existing austerity programmes, which involve the freezing of vacant posts, building and expansion restrictions and greater financial vigilance in general. But for the first time secondary educational activities, particularly community education programmes, are threatened.

"Every university has frozen posts, and universities are going to have to establish a set of priorities as to their various activities", Dr Henderson said. "More peripheral activities will be reviewed and many areas such as adult education programmes will suffer. Such fields will be first things to go."

He said there was little chance that universities would draw on our capital reserves. "As there are already several financially difficult years behind us, the question of looking into already tapped reserves is inadvisable. Universities are simply going to have to cut their coats according to the cloth and operate with about 10 per cent less funding."

Rhodes University, for example, will have to meet spiralling running costs with only 4,000 rand less than last year's grant.

Coloured and African universities are also expected to continue austerity campaigns. These "ethnic" universities are financed directly by the government department under whose control they fall (the Coloured University of the Western Cape, for example, is funded by the Department of Coloured Affairs). Substantial subsidy cuts are expected.

Republic of Ireland

Academics set to agree on salary increases

from Paul McGill

DUBLIN

University teachers in the Republic of Ireland are to get an 8 per cent pay rise when their current wage agreement runs out on March 1. This will be followed after a year by a further 2 per cent for three months. The arrangements are conditional on a national agreement worked out by representatives of unions and employer bodies being ratified at a special conference of the Irish Congress of Trades Unions next month.

Only a minority of academics will have a say in the acceptance of the agreement, since two-thirds of Irish lecturers are in the Irish Federation of University Teachers, which is not affiliated to the ICTU. But they will enjoy the benefits, none the less, probably from the time they receive their April salaries.

The lowest paid assistant lecturer will get a rise of £293, making the new starting salary £3,954. The most common scale of college lecturer will go up about £500 to between £6,300 and £8,070. The normal professorial salary will be increased by about £800 at the top to give a range of between £9,200 and £10,800.

Like other wage earners, academics will also benefit from the increased tax allowances announced in the budget earlier this month. A man with two children and a non-working wife who is earning £5,000 a year will gain £220, while one earning £10,000 will be £378 better off.

Combining the wage deal and the tax cuts, a married man with two children could be £12 a week better off if he is now getting £5,000; one earning £7,500 could be £17 a week better off and a professor on £10,000 could have almost another £23 a week in his pocket.

Single people will benefit from a quite separate claim which, by coincidence, is likely to be paid at the same time as the pay rises. As part of the government's obligation to eliminate discrimination on the basis of sex or marriage, a sum of about £160, backdated to last summer, will be given to everyone who does not receive the marriage allowance at present.

Although lecturers will share in the payout of the latest national wage agreement—if it is accepted—they have a[lso] the burden of previous [in]last few years, living have fallen substantially. [It] could happen over the co[ming] inflation goes much a[bove] ernment target of 7.5 per [cent].

On the other hand, [the] counterparts in Britain, university staff have [had] from several increases [in] few years over and a[bove] national agreements. In [1]977 was a 10 per cent rise fo[llowed] followed by 10 per cent [in] academics two years [la]summer, junior staff g[ot] 5 per cent rise backdat[ed]. All of these followed [the] recommendations on [pay] claims.

As a result, Irish [university] teachers have moved ahea[d of] colleagues in Britain, [who] viously they were wor[se off]. Kieran Mulvey, executive [secretary] of IFUT, claims, however, [that] staff: student ratio in Ire[land] only half as high—one [to 8] compared with one to [16] land.

"The workload of an [aca]demic is, on average, [the] in Britain", he argues. "[In] tion, there are more [part-time] adult and extra-mural w[ork] universities here becau[se of] underdeveloped higher [and] education systems. The [full-time] commitment is severely [limited] because of the [enormous] burden of teaching work."

Another complaint is [that] Higher Education Author[ity] country's statutory higher [education] tion body, has adopted the [unofficial] practice of having 40 p[er cent] senior and 60 per cent jun[ior] with the result that the [chances of] promotions is "massi[vely] "Universities should provide [incen]tives to people to stay [in] wise they will lose sig[nificant] dustry, especially engine[ering] computer programming."

There is a problem at [the] of the scale as well, be[cause] are usually recruited a[t] £1,600-£4,000, about £800 the equivalent scales in [the] technical colleges (though [salaries] are better at the [top] this crucial level of recr[uitment] provides an incentive to [the] regional colleges rath[er than] universities", Mr Mulvey [says].

West Germany

Two new faces in cabinet reshuffle

by Günther Kloss

This month's Bonn Cabinet reshuffle, triggered by the resignation of the Defence Minister, Herr Georg Leber, means new faces in both the Federal Education Ministry and the Research and Technology Ministry.

Herr Helmut Rohde, who had already said he wanted to leave his post, steps down from the Education Ministry. Herr Hans Matthöfer, previously in charge of research, has been promoted to Finance Minister.

A lawyer, Herr Jürgen Schmude, takes on the education portfolio while research goes to Herr Volker Hauff, formerly a junior minister in the Ministry. Both men belong to the Social Democrats.

Herr Rohde will be remembered for bringing the saga of the Federal Framework Law for Higher Education Institutions (*Hochschulrahmengesetz*) to a successful conclusion in 1976, even though the final legislation was far different from the original 1970 proposals.

Nevertheless, there is now an Act which does give Bonn some say in the formulation of more uniform higher education policies across the 11 disparate *Länder*.

Herr Rohde was also quick to see the close relationship between



Herr Rohde: piloted the Framework Law

education, training and career, the much wider problems [of] policies of a continual [ex]pansion of higher education.

His successor, primarily a foreign affairs expert, [will] have time when education is [in] Republic has reached a [low] point.

The euphoria of the [early] reform period has [given] problems associated with [the] autonomy in educational [policy] are still making central [plan]allocation of resources [across] areas.

He will find on his desk [a] spoken, though still [unpublished] report drawn up by his [own] officials on the urgent [need] more nationally [coordinated] policies.

£56,000 for Gothenburg lectures

Swedish-born London banker Félix Neubergh has donated £56,000 to Gothenburg University to finance annual lectures by leading international scholars. Given in English, the lectures will alternate between banking and finance and [the] ology. The first, on [economic] dependence, and [co-operation] given recently by the Nobel [prize]-winning Swedish economist, Gu[nnar] Myrdal.

Holland

Government takes tough line on courses

from John Richardson

AMSTERDAM

Dutch universities have been given one year more to voluntarily comply with the requirements of the Higher Education and Research Act of 1976. If they do not do so, the new Education Minister, Dr Arie Pais, has warned that he will impose a government solution.

The law stipulates that most university courses must be reduced from the current six to nine years to four years, that there should be a norm of 1,700 study hours per student year and that efficiency should be increased by broader-based curricula.

The universities have fiercely resisted the changes, particularly those concerning shorter courses, since they were first brought in by Dr Jos van Kemenade, the Education Minister in the previous Socialist-led coalition government.

They had hoped that any new administration would not insist on the changes. Instead, they find that the current centre-right government is being even firmer.

Parliament had demanded that redesigned short courses should be introduced from September this year. Course proposals sent in from the universities approved with some reservations by the Academic Council, the senior advisory body to the Ministry, were strongly criticized by the government, however.

Some of the new proposed courses increased the requirement for study hours without cutting the course duration, and others actually increased the length of the study period.

Virtually all the proposals made use of a loophole in the original legislation to submit plans for five-year courses. Senior government officials at one stage openly accused the universities of trying to "sabotage" the reforms.

If the universities were allowed to continue with their present curriculum policy, the expected extra 20,000-30,000 students by the early 1980s would lead to a situation in which what is already possibly the most expensive higher education system in the world would be too dear for even energy-rich Holland.

Dutch university education has expanded rapidly in the past 20 years. In 1955 the annual student increase was some 4 per cent and 3,133 students graduated. By 1965 the annual increase was 10 per cent with the number graduating standing at 3,707. In 1975 nearly 10,000 graduated.

In 1955 9.9 per cent of the total education funds were spent on the universities. This has now risen to almost 30 per cent. Higher education in the Netherlands is a high wage, labour-intensive industry: there are more full professors serving the Dutch population of 13m than there are in Britain, for example, with a population of over 56m.

Don's diary

Monday

Arrive at the Open University regional office at 8.45 am—a record for me. Having walked the Lothian round to school I then walk to the office. One of the many advantages of living in the centre of Edinburgh is to be able to get to one's place of work by strolling through the best Georgian architecture in Britain. Every morning I pass Robert Louis Stevenson's house in Heriot Row, and this morning the cygnets are now white strides along on the other side of the Row could be a doppelganger for the Weir of Hermiston. Today on a bright frosty morning, Edinburgh is at its best. I am, I decide, an Edinburgh nationalist.

Once in the office as senior counsellor I spend the best part of the morning dealing with claims for financial assistance by hard-up students. This is not a task I envy since the Open University has no option but to operate a straightforward means-test. Although we like to think that no student drops out for financial reasons, many just cannot afford to take an Open University course, and quietly abandon their studies through lack of cash.

Most of the afternoon is taken up with talking to a new member of our part-time staff. Her qualifications, her teaching experience and, above all, her enthusiasm impress me. The Open University is very fortunate to have such a fine corps of dedicated part-timers, especially the women. Some male chauvinist cynic said the Open University benefits from the "Margaret Drabble syndrome" I think I see what he means.

Tonight I go to the local study centre at Moray House College of Education. Again, I walk there but I am caught in a mini blizzard. All the students are completely new to the OU. After a Yard day's work they have to attend a tutorial for their first class. A mixed, lively bunch but anxious about what they have taken on. Not all of them decide to go round to the pub after the class. I can't say I blame them. Outside the snow has stopped but the pub is cold and so is the beer. I cadge a lift home from the tutor who teaches full time at the University of Edinburgh, and who is just back from a two-month trip to Guyana.

I spend two hours on the telephone dealing with routine work, then drop in to the local press bureau where I have to see six of my students. I'm seen pleased to see me but point out when I point out to them that they receive more face-to-face tuition than students on the outside. Certainly they are not allowed to attend the one-week summer school and they remind me about this. Last year one of them, who is due to be released soon, was given permission by the authorities to attend and is still ecstatic about it. The others are hopeful that they may get permission to attend in the future. I make a mental note that the following week I have to visit Carstairs State Hospital the Scottish equivalent of Broadmoor. Last year an OU student who was a patient there was killed in a tragic circumstances. This year we have another patient studying with us. Back in the office with its high Georgian ceilings and freshly painted walls I run into two colleagues. One is setting out for Inverness and the other is getting the train to Glasgow where she will catch a plane to Stornoway in the Outer Hebrides. Working with the OU in Scotland means lots of travel as there are, to use OU jargon, many geographically remote students".



Edinburgh—where walking to work is a pleasure.

After lunch I speak to an American law professor, who is keen to learn more about the OU. We seem to have a regular flow of foreign academics who take advantage of their visits to Edinburgh to pick up information and material about the university. Some are remarkably well informed about our activities, others less so. The lady professor is very knowledgeable indeed and we spend more time talking about the dévolution proposals than "multi-media distance teaching". On the train to Stirling University, I reread a book on Robert Burns by David Daiches.

I am met at Stirling Station by Alistair Niven, of the department of English literature, who drives me to the campus. It is strange to see Stirling University in winter. If anything it is even more stunning but it does not seem to be very busy as most of the students have finished for the day. Alistair runs a seminar on Indian literature in English. I have been asked along, together with an expert on Indian history, to discuss the background to the Raj. The students are a quiet bunch but their questions reveal their enthusiasm. They all look very very young but, come to think of it, just like the policemen, so do all the Open University students these days.

Tuesday

This morning I have arranged for an African post-graduate student to visit me at home. He works in a university in Ghana and is keen to discover more about the OU for a dissertation he is preparing. He has been referred to me by the education department at the University of Edinburgh. I spend most of the morning discussing the OU with him. I also learn a lot about Ghana and what plans they have for adult education in that country.

In the afternoon I work at home on my contribution to a small seminar on "Imperialism" which I have to take part in tomorrow at the University of Stirling. I work on until dinner. Since the kids eat at 5 pm it's "too" for them.

Tuesday always seems a bad night for the box but I get little chance to watch in any case since the evening is punctuated with phone calls from tutors and students. Being an OU student herself my wife never minds these interruptions. One lady from the Borders rings me up for well over half an hour. She pays for the call and it must be costing her a fortune. I remind her that for isolated students like herself the OU in Scotland operates a telephone voucher scheme. She is one of those students who live in a remote area and cannot attend a study centre regularly.

Wednesday

I know when I awake that this will be a busy day. The kids noisily set off for school. My wife, who teaches remedial subjects at a comprehensive on the far side of the city, reminds me yet again that compared to her, my lot is an easy one. I agree but today is going to be hectic.

I arrive back home at 3.10 just in time for the kids to come banging in. I try to work on part of a course unit I am writing for a new history course the OU will produce in 1980.

In the evening I receive only one telephone call. It is from a student in Perthshire who is on an OU committee at Walton Hall and is seeking my views on our higher degree programme.

Thursday

Catch the 7.10 am train from Dunblane back to Edinburgh. I don't feel too bad after the late night. Today I change hats. I have been elected chairman of Stevenson College Council. Stevenson is a thriving further education institution in Edinburgh named after the grandfather engineer of R.L.S. I do not feel competent to [illegible] of [illegible] I feel an impos[ter] [illegible] of the board of management. It would [illegible] the former colleges [illegible] such as Stevenson and Telford College [illegible] Today I have [illegible] to talk with Dr Peter [illegible] the new edition of the Times Educational Supplement Scotland, on [illegible] to be college.

After lunch I meet the students' Association Budget for next year with the Sabbatical president we have lunch with David Dick the principal. Willie is impressed with the college but David makes his usual justified moans about the inequities of the binary system and looks forward to the proposed expansion into tertiary education in Scotland. Stevenson College has been built up from a multiplicity of courses dropped by other Edinburgh colleges and has achieved some distinction in the further education field.

I arrive back home at 3.10 just in time for the kids to come banging in. I try to work on part of a course unit I am writing for a new history course the OU will produce in 1980.

In the evening I receive only one telephone call. It is from a student in Perthshire who is on an OU committee at Walton Hall and is seeking my views on our higher degree programme.

Friday

The radio, this morning, is more overloaded than usual with the parochial politics of devolution, a subject which is fast becoming the greatest bore of the century. As a Scottish professor of history in the OU (who shall be nameless) once said "An independent Scotland may be viable, but it won't be bearable". In Argentina a youth has been shot trying to get into a football match without a ticket. Possibly some of those Scottish fans who have already set out for South America. There is talk of hiring a submarine to get there.

Friday is meeting day. The OU thrives on meetings. Meetings to prepare meetings, meetings to discuss meetings that have taken place, meetings to postpone meetings. Committee's sub-committees and working groups proliferate. I suppose most of them are necessary and all of us on the Scottish staff seem to have developed a built-in immunity to them. Planning ahead is essential to our operation. Now in our eighth teaching year, I think I know how it must feel to be one of those painters who have to start all over again each year on the Forth railway bridge.

In the afternoon I attend the first meeting of Lothian Region's further education advisory committee. I am there as chairman of Stevenson. It is a lively meeting held in the board room of Napier College. Here in the superbly reconstructed seventeenth century room Napier, the inventor of Logarithms, lived and worked. Napier, Telford and Stevenson, the f.e. colleges in Edinburgh have their links with the past.

In the evening off to the annual OU students cheese and wine party held at Moray House (former residents, Mary Queen of Scots and Cromwell). I win third prize in the raffle—a rather dubious looking bottle of Hungarian wine. Better than Lambrusco I decide but it will go in the stew nevertheless. A cheerful evening and I see many students including those I taught last year at the "war and society" summer school held at the University of East Anglia. This year the school is to be held at Warwick. I shall miss Norwich.

Saturday

It had been my intention to go to a conference on tertiary education this morning at the University of Edinburgh but lying in bed I reason (a) it will be boring, (b) it is on all day, (c) I am too tired. The kids bring me tea in bed and I lie there watching television on an old, flickering black and white set. I suppose there must be an OU programme on BBC but I am happy to view *Multi-Coloured Swap Shop*.

In the late afternoon one short telephone call from a student and two from colleagues telling me I have missed a good conference. Yes, it is a rugbag of a job but after seven and a half years I still enjoy working with the OU.

Henry Cowper

The author is senior counsellor in the Open University in Scotland.

Comprehensive schooling and the universities



James Porter

"My grandmother wanted me to have an education, so she kept me out of school."

In spite of Margaret Mead's grandmother, the Government continues to expand the number of places in full-time education, and the most recent statement by the Secretary of State is of particular interest. After making an allowance for the loss of teacher training places, there is no real increase of places in the public sector, but there is to be a substantial increase of 33,000 students in the universities over the next four years.

The shift of support behind the universities and the slowing down in the build-up of public sector institutions runs counter to the policy of the late 1960s and early 1970s. The lack of any accompanying statement from the Government makes it difficult to interpret the projections or the apparent changes of emphasis on the high-level of teacher training rationalization. However, the 1972 White Paper now seems to have been largely abandoned, and its ragged remains are certainly no substitute for a new statement of policy concerning post-school education.

Increased numbers in the universities suggest that the new students who will be welcomed into higher education are likely to be offered more places on specialized honours degrees which, in spite of waning popularity in other parts of the world, remain the basic provision of the British university. The White Paper considers such courses to be suitable for only a minority of students, but there are no signs of the development of any alternatives within the university system. Even by the end of the '80s substantially less than one in five of the 18 plus age-group will have access to higher education, and it is becoming increasingly obvious that public expenditure on a minority of the privileged to enter higher education is many times that spent on the majority of the population who will leave school at the earliest age.

If the major share of expenditure is still devoted merely to increasing the proportion of students on conventional courses, the danger of Sothisism of the higher education sector will be increased, and this will reinforce the current difficulties faced by the secondary schools. It is difficult to see any positive move towards the objective of the 1972 White Paper which was to enable students to follow courses which would help them "in their careers and in the world of personal and social action".

The effects upon the schools of the present limited range of provision in the universities are widely accepted. The well worn route from "A" level into higher education ensures that candidates will be applying for single-subject honours courses which reflect the narrow and specialized curriculum of the sixth form. Ever since the Mountford Concordat of 1949, universities, with little reference to the schools or the Department of Education and Science, have effectively been the dominating force in deciding the curriculum of the upper secondary schools.

Repeatedly, in close association with the examinations industry, they have frustrated attempts to broaden the fifth and sixth form curriculum and to liberalize methods of assessment and examination. Set up by a meeting from Lord Snow, which rejected the memories of their pupils too to go on to higher education universities, have made relatively little impact upon the comprehensive schools that now provide the bulk of secondary places in the country.

A good deal of thinking about curriculum and assessment has taken place in the schools. Institutions of higher education, while quick to defend their own right to establish curricula and methods of examination, seem most reluctant to extend that right to their colleagues in the schools. One of the least acceptable aspects of the current situation is that, after thirteen years of schooling, entrance to higher education rests almost exclusively on the performance of students in a small number of three-hour examination papers. Also all that we now know about different methods of assessment and their effects is extraordinary that we still fail to put them into practice at the time when they matter most. Internal examinations—significantly called "mocks" are judged largely on their success in preparing students to perform well in the public ordeal which awaits tens of thousands of boys and girls this summer.

Ironically, last year's Green Paper gave a succinct and progressive view about the main purposes of assessment of individual pupils in school. Thus, it was argued that the teachers' assessment should provide information about the progress and needs of pupils, and enable the teachers to assess the effectiveness of their own planning and teaching. For the students it was argued that they should be enabled to know how they were progressing and that assessment should provide incentives to a better performance. As far as the parents were concerned, it was further proposed that assessment should enable parents to be informed about their children's educational progress.

The limited range in the present provision of courses in post-school education in this country and the use of A levels as a sorting mechanism for such courses effectively prevent assessment being used for such genuinely educational purposes. The maintenance of the present system puts the mark of failure on those children who either do not take A levels or, having done so, fail to achieve the grade which "earns" them a place in higher education. In the main, sixth formers are denied any credit for the very hard and intensive work they do between the ages of 16 and 18 except in relation to the narrow range of skills tested by examination papers.

Higher education institutions always emphasize the vital significance of the relationships between teaching, learning and examining. Such relationships are just as significant when the student is 16 or 18 years of age. The numbers of children taking public examinations have doubled over the past 10 years. It is totally inappropriate that the main measure of their success should still be the culturally biased and academically limited tests thought appropriate for entry to universities.

At present the curriculum both of the schools and of higher education fails too frequently to deal with matters which genuinely relate to the individual interests of the students. Methods of assessment tend all too frequently to serve the interests of those who wish to select and reject, rather than the continuing learning needs of the students. Those who welcome the recent increment to the number of students attending universities might also reflect that it represents a further consolidation of resources for a privileged minority when whole sections of society are largely denied access to educational resources.

Methods of selection and of assessment are merely one aspect of the increasing tension between comprehensive schooling and selective higher education. The continued expansion of high cost, post-school education has in other countries produced a rapid spread of the "diploma disease", and educational courses are largely justified in terms of accreditation. Perhaps the time has now come for teachers working in the comprehensive schools to define the kind of opportunities they would wish to have available for the decreasing numbers of 16 and 18 year olds who will be leaving the schools in the 1980s. It will be interesting to see which higher education institutions are most receptive to the advice they receive.

NOTICE BOARD

Compiled by Patricia Sanc... and Mila Ga...

Chairs

Professor Ian M. Allison has been appointed to the chair of mechanical engineering and head of department at the University of Surrey. He succeeds Professor J. M. Zarek.

Dr J. M. Newton has been appointed to the chair of pharmaceutics at Chelsea College. He replaces Professor J. E. Carless.

Professor Michael John O'Hara has been appointed to the chair of geology at the University College of Wales Aberystwyth from October 1, 1978.

The title of professor has been conferred upon **Douglas Gabriel**, head of department of accountancy and economics at Dundee College of Technology.

Appointments

Universities

Buckingham

Lecturers: C. G. Hall (law); G. E. H. Hughes (English literature); M. J. Ricketts (economics); M. Robinson (law); E. A. Shoesmith (mathematics and social statistics); I. N. Stevens and A. J. Hayter (history); L. D. Johnston (politics). Assistant lecturers: Hilary Brumwell (English literature); Jane Ridley (history).

Heriot-Watt

Lecturers: S. J. Barron (building); Neil Kay (economics); R. G. Harrison (physics). Librarian: D. W. G. E. Chivers (centre for extension studies); K. D. Eason (human sciences); J. Nichols (library and information studies); D. W. Cowell and W. McF. Young (management studies); Dr P. J. James (materials technology); A. Day and T. P. Jones (physical education and sports science); Dr R. P. Howson (physics); Dr D. McLean and Dr M. G. Milsted (transport technology). Lecturers: Dr R. M. Smith (chemistry); A. P. Cotton (civil engineering); A. P. Donaine (education); T. E. Cooke (management studies).

Loughborough

Promotions to senior lecturer: Dr J. J. T. Stenhouse (chemical engineering); Dr M. C. Ball and Dr R. C. Uff (chemistry); Dr R. McCutter (civil engineering); G. T. James (creative design); Dr C. J. Wringley (economics); J. R. Hough and P. Lauch (education); D. J. Allen and J. D. Manton (European studies) Dr G. E. Chivers (centre for extension studies); K. D. Eason (human sciences); J. Nichols (library and information studies); D. W. Cowell and W. McF. Young (management studies); Dr P. J. James (materials technology) A. Day and T. P. Jones (physical education and sports science); Dr R. P. Howson (physics); Dr D. McLean and Dr M. G. Milsted (transport technology). Lecturers: Dr R. M. Smith (chemistry); A. P. Cotton (civil engineering); A. P. Donaine (education); T. E. Cooke (management studies).

Oxford

James P. R. Lyell reader; John Claud Trowinard Oates (bibliography, 1980-81). Wilde lecturer: Professor John Duncan Martin Derrett (natural and comparative religion).

Forthcoming events

"A Case Study in Innovation: National Development Programme in Computer Assisted Learning" by Richard Hooper, Managing Director, Mills and Allen Communications Ltd, to be given at a meeting of the London and South East Branch of the Society for Research Into Higher Education on February 27 in the Vaughan Institute of Education, Bedford Way, London WC1.

* * *

"The new is no longer new" is the inaugural lecture by Professor Bruce Allsopp, professor of Environmental Design, to be delivered on March 1 in the RCA Lecture Theatre, Kensington Gore, London SW7 2EU.

Open University programmes February 25 to March 3

Saturday February 25

BBC 2

7.40 Twentieth century poetry: "Old Lovers Donain"—Thomas Hardy and Cornwall (A306; prog 2).
8.05 Environmental control and public health: Clean Air Success (PT272; prog 1).
8.30* Arts foundation course: Argument on television—Prog 1 (A101; prog 2).
8.55* Urban development: London 1650-1760 (HT301; prog 3).
9.45 Great Britain 1760-1950: sources and historiography: Landscape, Man and the Historian (A300; prog 3).
10.10 Art and environment: Resources in use (AD208; prog 2).
10.35* Material under stress: Tools of the Trade (T361; prog 1).
11.00* Ecology: Introduction to Ecosystems (B324; prog 1).
11.25* The nature of chemistry: Models in Chemistry (S324; prog 2).
11.50 Food production systems: Monitoring (T252; prog 1).
12.15 Drama: Oedipus Tyrannus (A307; prog 1).
13.00* History of architecture and design 1760-1950: The National Exhibition, Paris, 1900 (A305; prog 2).

RADIO 3 (VHF)

6.00 Analysis: Some Examples on Induction and Inequalities (M231; prog 1).
6.30* Music development: The Historical Perspective (DT301; prog 2).
6.40 Age of revolutions: The Crowd and the Press Revolution (A322; prog 1).
7.00 Technology foundation course: Introducing Design (T100; prog 33).
7.20 Arts foundation course: Why should reason veil (A101; prog 3); Announcements/Music Hall, 3).
7.40 Stephen (technical services). Marine scientist: C. S. Penman (biological sciences). Research associates: T. Bryant and D. Wilkinson (chemical and process engineering); W. A. Chapman and A. Miller (physics).

RADIO 4 (VHF)
(Not on north Scottish and Welsh transmitters)

9.05 Open Forum—3
9.20 Man's Religious Quest: Sociological aspects (AD208; prog 12).
9.40* Earth science topics and methods: Aggression in the Sea Floor Spreading (S333; prog. 6).
10.00 Languages and learning: Language and Social Change (L232; prog 13).
10.20 Man's Religious Quest: Sociological Aspects (AD208; prog 12).
10.40 Elements of music: An introduction to the Elements of Music (A241; prog 1).
11.00* Social psychology: Researching Psychosexual Identity (D302; prog 1).
11.20* The development of instruments and their music: An introduction to the Baroque Organ (A304; prog 1).
11.40* Twentieth-century poetry: Hardy and the Ballads (A306; prog 1).
12.00 Renaissance and reformation: Interpreting the Fourteenth Century (A220; prog 3).
12.20* Reading development: Sounds and Letters (PE233; prog 1).
12.40* Personality and learning: Scientific Approaches to Personality (E202; prog 1).
13.00 Patterns of inequality: Egalitarianism in British Politics (D302; prog 1).
13.20* Curriculum design and development: Blackmarsh at Braehead (E205; prog 1).
13.40* Environmental control and public health: Cholera and Failure in Pollution Control (PT272; prog 1).
14.00 O.U. Announcements/Music Hall.
14.20 The handicapped person in the community: What's Wrong with Being Blind (PE261; prog 1).
14.40* Fundamentals of statistical inference: Introduction to the Course (M343; prog 1).

RADIO 3 (VHF)

6.00* Renaissance and reformation: Interpreting the Fourteenth Century (A220; prog 3).
6.20* Earth science topics and methods: The Use of Libraries (S333; prog 1).
6.40* Environmental control and public health: Sea cess pools and Water Pollution Control (PT272; prog 1).
7.00 Mathematical models in social science: Mathematical Models in British Urban Systems (DT312; prog 11).
7.20 Science foundation course: Bio-Mechanics and How to Avoid Them (T104; prog 1).
7.45 Open Forum—3.

RADIO 4 (VHF)

9.10 War and society: History and Society: Introduction to the Study of War (A301; prog 1).
9.30 International politics and foreign policy: Intervention in International Politics (D320; prog 1).
9.50 Philosophy: Bertrand Russell and Other Minds (A305; prog 1).
10.10* The first years of life: As the Twig is Bent (PE211; prog 8).
24.00* History of architecture and design 1760-1950: Simplify Architecture and Design (A305; prog 2).
00.20 Music: The Designer (A307; prog 2).
00.40 Music: Art from 1848 to the present: Styles and Social Influences; Images of Reality (A323; prog 2).

RADIO 3 (VHF)
(Alternative broadcasts for north Scottish and Welsh transmitters)

24.00 Language and learning: Language and Social Change (L232; prog 13).
00.20* Earth science topics and methods: Aggression in the Sea Floor Spreading (S333; prog 6).
00.40* Man's Religious Quest: Sociological Aspects (AD208; prog 12).

Sunday February 26

BBC 2

7.40 Making sense of society: Being Rich, Being Poor (DT206; prog 3).
8.05 Science foundation course: Space and Time (S100; prog 3).
8.30 Mathematics foundation course: Sin Theta and X21 (M101; prog 3).
8.55 Analysis: Numbers (A231; prog 3).
9.20* Modelling by mathematics: Piecing together a Model (TM381; prog 11).
9.45 Exploring mathematics for science and technology: Inverse Functions (M231; prog 9).
10.10 Topics in pure mathematics: "You Can Have All of the Numbers, All of the Time" (M262; prog 10).
10.35 Systems modelling: Student Activity and Case Study on Dial-a-Bus (T364; prog 3).
11.00* The pre-school child: Joining In (E202; prog 4).
11.25 Advisory Programme for Applicants (E).
11.50 Language and learning: Language and Social Context (L232; prog 1).
12.15 History of mathematics: Numbers Now and Then (A818; prog 11).
12.40 Historical idea and the contemporary world: Time to Time (D302; prog 1).
13.05 Decision making in British education systems: Secondary Education for All (D304; prog 1).
13.30 National income and economic policy: Output, Income and Demand (D206; prog 1).

RADIO 3 (VHF)

8.00* Renaissance and reformation: Interpreting the Fourteenth Century (A220; prog 3).
8.20* Earth science topics and methods: The Use of Libraries (S333; prog 1).
8.40* Environmental control and public health: Sea cess pools and Water Pollution Control (PT272; prog 1).
9.00 Mathematical models in social science: Mathematical Models in British Urban Systems (DT312; prog 11).
9.20 Science foundation course: Bio-Mechanics and How to Avoid Them (T104; prog 1).
9.45 Open Forum—3.

RADIO 4 (VHF)

10.10 War and society: History and Society: Introduction to the Study of War (A301; prog 1).
10.30 International politics and foreign policy: Intervention in International Politics (D320; prog 1).
10.50 Philosophy: Bertrand Russell and Other Minds (A305; prog 1).
11.10* The first years of life: As the Twig is Bent (PE211; prog 8).
11.35* History of architecture and design 1760-1950: Simplify Architecture and Design (A305; prog 2).
12.00 Music: The Designer (A307; prog 2).
12.20 Music: Art from 1848 to the present: Styles and Social Influences; Images of Reality (A323; prog 2).

Monday February 27

BBC 1

6.40 Cognitive psychology: Creating the System (D303; prog 1).
7.05 Personality and learning: Rosenzweig's "Brain Work" (L201; prog 2).

BBC 2

6.40 Systems behaviour: Deep Sea Container Force (T251; prog 1).
7.05 Mathematical analysis: Introduction (A818; prog 13).
7.30 Physiology of cells and organisms: Cell Membrane Structure (S321; prog 1).
10.55 Twentieth century poetry: "Old Love", Dominic Facey" (T 251 and Cornwall (A306; prog 1).
15.45 Linear mathematics: Matrix Normal Forms (M102; prog 2).
16.10* Mathematics foundation course: Sin and Cos (M101; prog 3).
16.35* Environmental control and public health: Clean Air Success (PT272; prog 1).

RADIO 3 (VHF)

6.30 Food production systems: World Food Resources (T477; prog 1).
6.40* Man's relations, dual: Sociological Aspects (AD208; prog 10).
17.45 People and organisations: Introduction (T252; prog 1).
18.05 National studies and economic policy: Shaping Supply—Output Technique (D206; prog 2).
18.25 Physical properties: Vector Substances (M202; prog 1).
18.45 Solids, liquids and gases: Methods of Determining Inter-Atomic Force Laws (S324; prog 1).
19.05 Open University Announcements/Music Hall.
19.10* Making sense of society: Racial Attitudes in Britain (D101; prog 3).

Alternative broadcasts for north Scottish and Welsh transmitters

24.00* Reading development: Sounds and Letters (PE233; prog 1).
00.20* Reading: Development: Sounds and Letters (PE233; prog 1).
00.40* The development of instruments and their music: An introduction to the Elements of Music (A241; prog 1).

Tuesday February 28

BBC 1

6.40 The development of instruments and their music: The Baroque Organ (A304; prog 1).
7.05 Social psychology: Psychosexual Differences, 2 (D306; prog 2).

RADIO 3 (VHF)
(Alternative broadcasts for north Scottish and Welsh transmitters)

24.00* Language and learning: Language and Social Change (L232; prog 13).
00.20* Earth science topics and methods: Aggression in the Sea Floor Spreading (S333; prog 6).
00.40* Man's Religious Quest: Sociological Aspects (AD208; prog 12).

Wednesday March 1

BBC 1

6.40 Control engineering: Control Systems (T351; prog 11).
7.05 Language and learning: Hermitte Normal Form (M201; prog 5).

BBC 2

6.40 An introduction to materials: Electron Microscopy (T237; prog 1).
7.05 The nature of chemistry: Structures and Properties in Organic Chemistry (S304; prog 1).
7.30 Principles of architecture: Design: Image and Meaning (A305; prog 1).
10.55 Psychology and learning: Psychosexual Identity (D302; prog 1).
16.55 Social psychology: Researching Psychosexual Identity (D302; prog 1).
17.20 Solids, liquids and gases: Newton's Laws of Motion (S324; prog 1).
17.45 Biological bases of behaviour: Communication and Control in Biology (E353; prog 1).
18.05 Patterns of inequality: Looking at inequality (D302; prog 3).
18.25 Renaissance and reformation: The Invention of Printing (A220; prog 4).
18.35* Science foundation course: Space and Time (S100; prog 3).

RADIO 3 (VHF)

6.00 Cognitive psychology: Artificial Intelligence (D303; prog 1).
6.20* Language and learning: Language and Social Change (L232; prog 13).
6.40* Social work, community work and society: The Social Welfare Network (D236; prog 2).
17.45 Materials and chemistry: Extraction of Metals in Chemistry (S303; prog 2).
18.05 Solids, liquids and gases: Ideal Gas (D3561; prog 2).
18.25 Man and environment: Everyday Sound Worlds (TA295; prog 2).
18.45 Man and environment: Listening Children and the Psychedelic Introducer (TA295; prog 2).
19.05 Open University Announcements/Music Hall.
19.10 Arts foundation course: Doing History: Realm Theory and Narrative (A101; prog 2).

Alternative broadcasts for north Scottish and Welsh transmitters

24.00* Personality and learning: Scientific Approaches to Personality (E202; prog 2).
00.20* Renaissance and reformation: Interpreting the Fourteenth Century (A220; prog 3).
00.40* Social psychology: Researching Psychosexual Identity (D302; prog 1).

Thursday March 2

BBC 1

6.40 Principles of chemical processes: Physical Chemistry and Industry (T237; prog 1).
7.05 An introduction to the chemistry of carbon compounds: Extraction: Methods of Structure Determination (S322; prog 1).
7.30 Oceanography: Going to Sea (B334; prog 2).

BBC 2

6.40* Drama: Oedipus Tyrannus (A307; prog 1).
7.30* Science and Society: Schooling for the Masses (E202; prog 1).
14.55* Computer analysis: Introduction (M353; prog 1).
17.20 Statistical problems: The Interested Parties (P851; prog 11).
17.45 The development of instruments and their music: The Baroque Organ (A304; prog 1).
18.10* Control engineering: Control Systems (T351; prog 11).
18.35* Science and Society: Being Black (E202; prog 2).

RADIO 3 (VHF)

6.00* Elements of music: An introduction to the Elements of Music (A241; prog 2).
6.20 Mass Communication and Society: Television Coverage of the 1926 General Strike (D205—A; prog 3).
6.40 Personality and learning: Psychoanalysis (L201; prog 2).
17.45* Analysis: Some Examples on Induction and Inequalities (M231; prog 1).
18.05 Management in education: Levels of Management (E262; prog 1).
18.25 Man-made futures: design and technology: Technology and Society (T262; prog 3).
18.45 Quantum theory and atomic structure: An Overview of the Quantum Theory (S305; prog 11).
19.05 Open Announcements/Music Hall.
19.10* Technology foundation course: Introduction to Design (T100; prog 34).

Alternative broadcasts for north Scottish and Welsh transmitters

24.00* The nineteenth-century novel: Hardy and Tragedy: The Shadow of a Crime (A306; prog 3).
00.20* Social work, community work and society: The Context of Welfare (D236; prog 2).
00.40* Open Forum—3.

Friday March 3

BBC 1

6.40* Renaissance and reformation: Interpreting the Fourteenth Century (A220; prog 3).
7.30* Biochemistry and molecular biology: Carbohydrates (B332; prog 3).

BBC 2

6.40 Telecommunications systems: Digital Switching (T351; prog 13).
7.05* Comparative government and politics: Political Stability—Is Stability Desirable? (D251; prog 11).
7.30* Patterns of inequality: Looking at inequality (D302; prog 4).
16.55 Social psychology: Psychosexual Identity (D302; prog 1).
17.20* An introduction to the study of human environments: Differing Environments: Different Cultures (SD251; prog 11).
17.45* Science foundation course: Bio-Mechanics and How to Avoid Them (T104; prog 1).
18.10* Linear Forms (T251; prog 11).
18.35* Biological bases of behaviour: Chemistry and Physiology of Nervous System (SD324; prog 1); Introduction to Physiological Psychology and the Nervous System (SD324; prog 1); Physiological Psychology and the Nervous System (SD324; prog 1).

RADIO 3 (VHF)

6.00 Contributing design and development: Television (L201; prog 2).
6.20* Patterns of inequality: Looking at inequality (D302; prog 4).
6.40 Drama: The Designer (A307; prog 2).
17.45* The age of revolutions: The Crowd and the Press: Revolution (A322; prog 1).
18.05 Public administration: Local Government (D331; prog 4).
18.25 History of architecture and design 1760-1950: Simplify Architecture and Design (A305; prog 3).
18.45 Spatial differential equations: Applied mathematics: Introduction to Course (M351; prog 1).
19.05* Science foundation course: Bio-Mechanics and How to Avoid Them (T104; prog 1).

Alternative broadcasts for north Scottish and Welsh transmitters

24.00 Decision-making in British education systems: Secondary Education for All (D304; prog 2).
00.20* Technology: What's Wrong with Being Blind (PE261; prog 1).

The Asian entrepreneurs

Humiliated and discriminated against on the job market, Asian immigrants have turned to self-employment.

New Society, out today, shows how Asian entrepreneurs are breathing new life into a host country riddled with apathy and cynicism. Does their successful private enterprise explain why they are resented by the white "nation of shopkeepers"?

NEWSociety

OUT TODAY 25p

THE NUFFIELD FOUNDATION

Grants for Educational Innovation

Applications are invited for grants of up to £3,000 to support educational innovations in undergraduate teaching at universities, colleges and polytechnics.

Assistance with the introduction of new courses, the development of audio-visual and other teaching materials and the evaluation of existing and novel courses all qualify for support under the Foundation's Small Grants Scheme for Undergraduate Teaching.

The scheme was first introduced in 1975, since when grants totalling £210,000 have been awarded.

Applications received by May 2, 1978, will be adjudicated during June. Particular attention will be paid to the originality of proposed innovations and the likelihood that they will be of value in institutions other than those primarily concerned. (This scheme is only open to applicants from institutions within the U.K.)

Application forms and further details can be obtained from the Director of the Nuffield Foundation, Nuffield Lodge, Regent's Park, London NW1 4RS.

COURSES

STUDY AT HOME for a London University External DEGREE

Wolsey Hall, the only correspondence college with full courses for London University External Degrees, provides individual instruction by highly qualified tutors.

Wolsey Hall has a remarkable record of success - a pass rate of over 80% is achieved in some degree subjects, including a high proportion of the 1st and upper 2nd class honours awarded.

Courses cover B.A. in One Subject, B.Sc. All, Law, LL.B., Econ., LL.B., B.D., London University Diploma and Postgraduate Cert. in Education. College of Preceptors Diplomas, as well as a wide range of professional, career and G.C.E. subjects.

Free prospectus from the Principal
W M M Milligan MBE, TD, MA.
Dept B41, Wolsey Hall, Oxford OX2 6PR.
Telephone (0865) 54231
(Answerfone after 4.45. p.m.)

Wolsey Hall Oxford

Accredited by the Council for the Accreditation of Correspondence Colleges — Founded 1894

هكذا من الأصل

An outspoken man who contributed so much to Britain's survival

The hoaxer who went to war



A German V2 rocket.

Robin McKie talks to Professor Reginald Jones who led wartime Scientific Intelligence and whose book, Most Secret War, *is published on Monday.*

Professor Reginald Jones has a precise picture of his importance to Britain's survival during the Second World War. Despite his "magnificent prescience and comprehension", which Churchill believed help "rose us from disaster, Professor Jones does not rate his work with scientific Intelligence as quite that invaluable.

"Without us, things would have been worse, there is no doubt about that. But I don't think we would have lost the war," he said. "We could have taken more bombing and we would have got ashore at D-Day without knocking out the German coastal radar—although the casualties would have been countless."

However, his wartime work, revealed in fascinating detail in his *Most Secret War*, had a profound effect on his later academic life. For one thing, his experience in combating German radio navigation in the Battle of the Beams, their radar developments, the Nazi V1 and V2 rockets, and even their primitive nuclear projects, instilled in him the importance of collaboration between scientists and the services.

Without the collaboration that existed in Britain, scientific developments in Germany were often illused or inappropriate to the needs of their forces.

Later, when he was appointed professor of natural philosophy at Aberdeen University—thanks, in part, to Churchill's persistent backing—he came to value his military experience as a preparation for academic bureaucracy.

"There is enough common ground between running a university department, especially if laboratories are involved, and commanding a ship, to make it worth learning from service experience", he said.

Indeed, such an approach should be applied to the whole hierarchy of higher education which he believes would benefit from far closer contacts with the outside world, particularly the military. University people are shut up, he feels, and have a lot to learn from the latter, especially in the administration of the greatly increased numbers that now attend college and higher education centres.

Despite his admiration for matters of discipline and military spit-and-polish—his father was a drill sergeant at Aldershot—the young Reginald Jones, even then resisted a certain resilience and a hint of rebellious restlessness.

In protest at one master's excessive homework allocations, he worked out an answer to a problem on specific heats to 11 decimal places—and got it wrong. The move had its desired effect, however—for after being told that the answer matched the length of homework he was setting, the master modered his demands.

Another seemingly-trivial childhood incident, which had great importance in shaping his life, took place in 1922 at the Oxford and Cambridge Boat Race. The competition caused a great political split among the schoolboys, one of whom punched young Reginald Jones on the nose for saying he supported Oxford. From then, he wrote undying enmity to Cambridge and later, when he was asked by his school to enter a scholarship for Cambridge he refused. And in 1929 he entered Oxford to study physics.

At university, he revealed himself to be an excellent hoaxer. One poor colleague at the Clarendon Laboratory was led into believing that the professor, Frederick Lindemann—later Lord Cherwell—was gambling the department's grant in a bid to raise the necessary funds for research.

Indeed, Professor Jones believes there is much in common between science and hoaxing—giving Newton, Maxwell and Gamov as prime scientific exponents of the practical joke. In a hoax, a false picture of reality is established and someone who is good at setting this up should also be able to perceive the correct aspects and evidence of a scientific problem.

He maintained that his abilities as a hoaxer greatly helped when he was trying to confuse the German scientific war effort—for instance with their navigational X and Y beams which he arranged to be jammed.

At Oxford, he began work on the infrared detection of aircraft, and was slowly absorbed into scientific defence. His first wartime role was spent unravelling the secrets of the German navigational radio beams which were directed over Britain. Despite the scanty intelligence data available, he and his small band of associates succeeded, although Professor Jones admitted that his work with the beams could not stop the bombing of London—it was *too* large a target—but it put an end to German successes over inland industrialized cities. Churchill said it was a story "the like of which was never surpassed by tales of Sherlock Holmes."

It was Professor Jones's responsibility to anticipate the German applications of science to warfare so that we could counter their new weapons before they were used. His formidable success is best indicated by his personal progress through the war. At the beginning he was a scientific officer with the Air Ministry; by the end, he was director of intelligence. Certainly, it was a time when he flourished under the harsh demands and expectations of martial effort and to an extent, Professor Jones still harks back to that period.

"War is different from peace; in the latter fallacies can be covered up more or less indefinitely and criticism suppressed; but with the swift action of war, the truth comes fairly quickly to light", he said.

In 1945, it was decided to split up Scientific Intelligence into three separate sections under the three different services. It was a move that he strongly contested, believing that a unified intelligence department was best suited to the needs of the forces. "I was prepared to spend my life in building up intelligence, had I been allowed to do so in my own way", he said.

When he was offered the chair of natural philosophy at Aberdeen University, he accepted, although he returned to the directorship of Scientific Intelligence in 1952 for a year at Churchill's request.

"The move to Aberdeen was an enormous wrench. I had sufficed so much from professors on wartime committees speaking with authority on things they knew nothing about. It was a challenge to bat on their wicket."

Sadly, the innings has not been all that good, he adds. The Robbins report stampeded people into expanding higher education and changing it out of all recognition. It was irresponsible planning to attempt to expand universities so quickly and instead of causing the growth of centres of excellence, it resulted in "mushrooms, of mediocrity".

Now Professor Jones takes a gloomy view of the prospects for higher education in Britain. With the cutbacks in university expenditure, there is now no room for young, bright academics to invigorate the community, which will be increasingly burdened by a preponderance of elderly staff.

In a sense, these are cries of frustration from a man once so firmly in the midst of action, who can now only watch as the world he understands changes irrevocably. Not that he is particularly inactive, however, for the past two years have involved him in research, preparing his book and lecturing abroad—including defence speeches on scientific intelligence at the Pentagon. Indeed, his work seems to have pushed personal contacts aside.

"When I was filling in my security clearances, I used to give Sir Winston Churchill and Lord Cherwell as names of people who knew me well and could vouch for me. Now they are gone, I find there is no one who knows me well enough to do this."

That seems a particularly enigmatic footnote to the career of an outspoken man who contributed so much to our war effort and survival and whose views have served as a focus of criticism of British universities.

Most Secret War is published by Hamish Hamilton, price £6.95.

Laurence Martin—a man for all academic seasons



Professor Martin.

If the result of the June 1970 election had been different, Professor Laurence Martin might now be sitting in Whitehall instead of the vice-chancellor's chair at Newcastle University.

Denis Healey, then Defence Minister, offered him a job in the Ministry early that year. His task was to be the establishment of a long-range planning staff and the letter of appointment was already in his hands when the election took place and Labour lost power.

Lord Carrington, Mr Healey's successor, was not the man to confront the Civil Service with a dynamic new adviser. A senior civil servant took Professor Martin out to lunch and told him with much politeness and embarrassment that his services were no longer required.

The professor, who took up his Newcastle post this term, is nobody's idea of the conventional vice-chancellor. He admits that he is more at home in the corridors of the Pentagon and Whitehall than in the committee rooms where university administration is carried on.

The touch of Hollywood glamour is unobtrusive but real. He says he has been too busy flying round the world to have much time to think about the role and direction of universities.

His views about them are still being formed. At the moment they are instinctive and he is not prepared to be dogmatic about anything. "I have some hard thinking about universities to do in the next few years." Even when the hard thinking is over, a man who believes universities must stop taking themselves too seriously is unlikely to pontificate.

Professor Martin read history at Christ's College, Cambridge, but the award of a fellowship to Yale brought the first break with traditional academic disciplines. He did his PhD in international politics—something it would have been impossible to do in this country in the 1950s—and went on to become an assistant professor at the Massachusetts Institute of Technology.

"It was the time of the Cold War. Everyone was scared stiff. I was a very junior member of a group which included Kissinger and McGeorge Bundy which was looking at the concept of arms control."

Someone was wanted to teach the new subject, and when Kennedy became President, Professor Martin went to the Johns Hopkins Institute in Washington and became involved in consultancy work for the Government. In 1964 he returned to Britain to take the world's oldest chair of international politics — at Aberystwyth.

The decision to return was a difficult one and it was taken for family reasons. He still loves America and returns there five or six times a year. His mid-Atlantic accent reflects the conflict and his conversation has a strong American flavour. "I have more friends whom I can 'take out my dirt' with out there."

In America the opportunities for the academic in politics are greater. If he had stayed he might have been assistant Secretary for Defence. But he considers emigration a great risk because it is "so fundamental and radically affects the personality".

In his own field, the judgment about which is the best place to be is nicely balanced. "Washington is where the action is but the words are full. Here what is going on is much less important, but the role an individual can have is much bigger."

Nor that an academic can have much influence on affairs of state. "I have never had any illusions that I would change the course of history." He does believe, however, that his advice has borne some fruit. James Schlesinger's paper on the reshaping of American policy towards tactical nuclear weapons reflected Professor Martin's own views on the subject. He is on two panels on disarmament in this country and has been an adviser to defence colleges and the research institutes of the armed forces.

The professor believes firmly in the need for academics in the corridors of power. They have no axe to grind and they can take a long-term view. The benefits are mutual. "I feel that a lot of people writing on strategic studies do not take the trouble to talk to the people in power." He points out that he reads very few books because most of the things he is interested in are not in print.

He is not political in the party sense but describes himself as a man of the centre. "To many academics I would appear to be Right of centre because I write in a relatively dispassionate way. I take the existence of military force for granted." He has always been critical of the Establishment and says it was obvious that the Vietnam War was disastrous, if only from a technical point of view, and he told the American Government so.

Professor Martin also became very unpopular during his spell as adviser to the Heath Government in Britain. "I was always highly sceptical of the idea that the Russians would sink all tankers as they went round the Cape."

Though he is a member of the council of the Institute for the Study of Conflict he emphasizes that he had nothing to do with the controversial Gould report *The Attack on Higher Education*. He believes there is evidence that there are people in British higher education who have allowed their Left-wing views to colour their approach to teaching and hiring and firing of academics.

But he is also prepared to believe that there might be similar people of different political persuasions. "I am certain that only a very small number of people is involved. I am not at all convinced that this is something we have to do anything about other than maintain accepted standards of scholarly integrity."

He does not expect to be an autocratic vice-chancellor though he thinks that sometimes you can only get things done if there is one man to make the decisions. At his last job as professor of war studies at King's College, London, he was glad to let the registrar deal with the administration. "Universities are relatively well-working institutions and most of the people in them have very absorbing activities which are dearer to their hearts than administration. Many forms of democracy demand a degree of participation which many people are not willing to give."

He describes himself as "instinctively conservative with a small 'c'" but favours the maximum interchange of views between members of a university community.

Why then is he going to Newcastle? "I am not one of those academics who always planned to be a vice-chancellor but if you are a professor you must have thought what shall I do for my next trick." He was invited to have a look at the place, liked the city and found the university solvent and in good heart. Another attraction was the promise that he would not be expected to give up researching and publishing books. He has a keen interest in university administration and how new degree courses should be structured.

But most of all, he likes solving problems. "If being there when the problem is solved means being interested in power, I am interested in power. I don't think I want to see people jump."

At Newcastle he will tackle the question of accommodation for more students than the university expected and will also fight for more sport and student union facilities.

The city appeals to him because it has a cosmopolitan flavour and the university because it has close relations with industry. Oxbridge has no attraction for him. It is not the place for someone with his unconventional interests, he says.

The expansion of the university does not trouble him. "I know no reason to believe that by holding down numbers you will necessarily raise the quality." But he argues that universities are elitist institutions with a special role and that they should probably stay that way.

When he told a friend, who is secretary of defence in a Scandinavian country, that he was off to Newcastle to be vice-chancellor, he was amazed. Why did he want a job which would detract from what he was really interested in, the friend asked? But Professor Martin has enough energy to have it all ways. He will continue to fly to America and to sit on his disarmament panels; and he will also add to his stock of books on defence. Settling down to a quiet life is not on his agenda.

Judith Judd

New encyclopaedia charts the revolution in astronomy

The publication of a definitive survey of star knowledge of the universe may seem premature in view of the past two decades of dramatic discoveries which have transformed astronomy. Yet Simon Mitton, editor-in-chief of the recently published *Cambridge Encyclopaedia of Astronomy*, believes we have reached the closing stages of the scientific revolution that has left most reference books completely out of date.

Radio astronomy and the development of satellite instruments which can explore the infrared and X-ray regions of the sky have produced a radical new vision of the heavens. Incredibly dense neutron stars and spinning pulsars have been discovered and now the search is on for black holes—collapsed stars so dense even light cannot leave them. Space probes have allowed the Moon and the inner planets to be explored at close quarters and among the stars scientists have found organic molecules, the building blocks of life itself. At the far reaches of the universe, galaxies exploding with incredible energies have been discovered and scientists have found evidence of a weak radio background—the last faint echo of the cosmic eruption which heralded the beginning of universe 10,000 years ago.

Now, rather sadly, it would appear this golden age of astronomy has reached its peak. Although technology will has to develop the techniques which have opened a new window on the universe, Dr Mitton believes this will not radically alter the view, it will merely improve the definition.

"The improvement of present techniques will not change the order of magnitude of our knowledge", he said. "Really, we are now going through a phase of consolidation of our understanding."

The only likely exception will be the Pioneer space probes which will explore the distant planets of the solar system over the next few years.

This belief led Dr Mitton to the idea for the Cambridge book, although the real motivation came when the renowned Larousse encyclopaedia of astronomy went out of print four years ago. The book was already in its third revised edition and, knowing it could not provide any more reprints, Dr Mitton planned a new encyclopaedia to encompass the full range of latest research.

"I thought about the concept for some time, discussing it with colleagues and decided to start the whole thing from scratch. I came to the conclusion that it was best to prepare a modern reference work which presented the various astronomical topics thematically with a good cross-reference section.

"This approach is becoming increasingly common and, although it may give the book an odd look, it is better than the normal itemized, dictionary presentation. If someone wishes to read up a particular interest, such as the inner solar system, he can have a good read without having to jump about the book."

If coherence was to be the key to the new encyclopaedia then full consultations between all contributors had to be ensured. This meant using the young team of astronomers at Cambridge rather than famous scientists round the world. Of course, there were plenty of historical precedents at Cambridge for major works associated with astronomy. Newton developed the law of universal gravitation there and Eddington and Jeans worked on theories of the structure of stars. So the joint work of the scientists at the Institute of Astronomy seemed appropriate and Dr Mitton believes it was tremendously important to project's results.

"The whole approach mean we could all interact while writing the book. Collaborating at a distance just doesn't work for a concept like this."

However, there were one or two topics which proved particularly unsuitable for the institute. In these cases, other astronomers were asked to contribute—for instance, Professor John Percy of the David Dunlap Observatory in Toronto, who wrote the section on variable stars.

"By this time I realised that the project was too big for any single publisher to handle, so I started looking for a company which arranged co-editions", added Dr Mitton.

The company was Trewin Copplestone of London who organized an international edition which is published in Britain by Jonathan Cape; in the US by Crown; and in Canada by Prentice Hall. In addition, six foreign language editions of the encyclopaedia are set for publication. The total print run for the book is to be 100,000 — with 55,000 of these in English.

The decision to produce an international encyclopaedia released the necessary money for an elaborate venture. Designer Richard Bridgett was called in and he maintained close collaborative links with the institute team.

The result is a lavish, richly-illustrated reference work of 480 pages and a retail price of £15. Many of NASA's most spectacular space photographs have been incorporated and there is also a profusion of recent astronomical pictures from several leading observatories. The diagrams include a 14-page computer produced star atlas and there are descriptive sections on planets, the sun, the stars, galaxies, life in the universe and cosmology. The practical aspects of astronomy are also covered with chapters dealing with professional and amateur instruments.

The authors have approached the book by attempting to take the difficult road between over-simple popularisation and a standard textbook. In general, their attempts have met with favourable reviews although there has been a certain amount of detailed criticism about the exclusion of various current controversial issues. For instance, there is no discussion about the debate over solar obliateness—the degree to which the sun deviates from a sphere. This has important repercussions for our understanding of relativity and gravity, for these studies depend on accurate measurements of the solar mass.

It would seem reasonable to expect some such mention in the encyclopaedia but Dr Mitton defends these omissions. "We felt we wanted the book to be a work of reference which would last for some time. If we included something which had not yet been fully resolved, the book would have to give over a great deal of space to the various arguments involved. Apart from dating the book, this approach would have required space that just was not available", Dr Mitton said.

"I would say that to a large extent the encyclopaedia reflects established view of things. It is not much speculative stuff at all."

It is planned that *The Cambridge Encyclopaedia of Astronomy* will have a valuable life as a reference work for five years with the aim of a further five years' use after that. Meanwhile, a revised edition is already planned, although Dr Mitton will not start for another two years. *The Cambridge Encyclopaedia of Astronomy*, Jonathan Cape: £15.

Robin Mc



Nebulosity in Monoceros, situated in south outer region of NGC 2 A 200 inch photograph in red light. Hale Observatories.

Polytechnique in French means more prestige for engineers

The function and place of the engineer in France differs profoundly from his English counterpart. So does his training which falls into two main groups.

The first group graduates from the *Ecole Polytechnique* and enters the *Grandes Corps d'Etat*. These are technical cum high level administrative bodies comprising *Mines*, *Ponts et Chaussées* (which deals with major infrastructural development and planning and brings together some 1,000 engineers), telecommunications, rural engineering (*génie rurale*), the National Statistics Institute and the Armed Services' Engineering Corps.

The second group passes through less prestigious *Grandes Ecoles*—proper engineering schools—run usually by the particular ministry to which the graduate will later go. This sector group forms what are known as "technical engineers" (*ingenieurs de travaux*). They are a sub-species, less exotic, involved less with the high affairs of state and state planning than with the type of enterprise normally associated with their British counterparts. They are roughly the equivalent of technical scientific staff in the British Central Administration.

This is not to say that eventually *Polytechniciens* do not enter the private sector. They do. There is hardly a large firm in France that does not boast of at least one, if not a whole *clique*, of *Polytechniciens* at all levels, not just in the boardroom. This is equally true for nationalized industry. Thus 50 of France's largest enterprises employ over 1,000 *Polytechniciens* of whom 150 are at directorate level. Even in the turbulent world of politics, it is hardly thinkable that the minister's team of personal advisers (*cabinet ministériel*) should be bereft o fits *Polytechnicien*.

Thus, the influence and prestige of *Polytechnique* permeate through all levels of French life—including, naturally, the education system and—though perhaps less naturally—the church. What other country but France can claim to have two bishops trained as engineers? Nevertheless, there are signs of a certain malaise both inside *Polytechnique* itself and outside in government and industry over certain developments taking place in it. Several times in the past year, students have given tongue to a grumbling discontent.



Polytechnique students step out in uniform

In part, this is due to an increased workload introduced after last year's move from the Montagne Ste Geneviève to the Paris suburb of Palaiseau. In part, it springs from an exasperation with the military atmosphere surrounding the school. This is not surprising. *Polytechnique* is under the command of a serving general, General Augier, and is placed under the overall responsibility of the Ministry of Defence. However, to the authorities, more worrying by far are changes taking place in the type of post *Polytechniciens* now opt for. More are going for administration rather than into scientific research appointments.

Two years are spent studying. During this time, the student (and there are also 10 lady *Polytechniciennes*) is expected to reach the level of the *maitrise*—equivalent to the master's degree by thesis—in maths, in physics, and in chemistry. To compare this with the three-year single or even joint honours in history, modern languages or PPE at Oxbridge plus the Civil Service Entry Examination would, of course, be exceedingly invidious and depressing. We will not do so.

The *Polytechnicien's* day starts with a study of one of four fundamental courses, either mathematics, applied mathematics, physics or engineering (*mechanique*). These follow a modular pattern—one hour lecture, then two hours practical work in small groups. The afternoon is given over to languages and sport. *Mens geometrica in corpore sano*. Thursday mornings are devoted to the contemplation of the humanities, and the social sciences—a species of cultural *omnium gatherum*, covering such areas as political economy, literature and painting.

Important changes in the examination system have been introduced since the move to Palaiseau. First, orals have been abolished. Second, students now sit four examinations, each lasting a week, in the course of the year. To many, this is tantamount to creating that system of intense "swotting" that is part of the ritual of getting into *Polytechnique* in the first place. It is not appreciated. Finally, the horrid prospect of repeating—staying down a year to repeat the course—has reared its ugly and unprecedented head. In 1976, this dismal fate befell nine students.

The military regime of *Polytechnique* is, to some, what makes it unique. If pupils spend two years studying they also spend one year under the colours. Studies and military service are integrated in rather the same way as sandwich courses in Britain integrate study with work experience.

The role and purpose of the school is defined in the law of July 15, 1970. This law states: "The *Ecole Polytechnique* has, as its remit, to give pupils a scientific and general culture so that, after specialized training, they will occupy posts demanding high qualifications and high responsibility of a scientific, technological or economic nature in either of the civil or military branches of the state administration, in the public services or, more generally, in the main activities of national life."

Whatever legislation stipulates, it is nevertheless disturbing that the technical and administrative elite of the country should show symptoms of that supposed fatal disease—the flight from science—all the more disturbing as with the relatively small numbers—300 students pass yearly from *Polytechnique*—their rigorous training their role that much more crucial to sound administration.

What of the *Polytechnicien* as person? Agreed, he is admired by employers for his rapier-like speed of his mental processes, for his intellectual rigour and for the consummate ease with which he deals with abstraction. On the other hand, he does not appear to regard the scientist, rigid in his thinking, as dogmatic. With the possible exception of the large scale enterprise, he is reckoned rather ill-adapted to the real-life problems of industry.

When *Polytechnique* moved to Palaiseau, its buildings were taken over by a new Institute for Political Sciences. Now awaiting its first intake it will take in Engineers and at least four years working experience and emphasize the social sciences and economics in its curriculum. Its aim is to give engineers-administrators a solid grounding in both administrative theory and management (*gestion*) in preparation for the offices of responsibility they will take up later.

Hopefully, the new Institute of Action Sciences will mark a step in the education of engineers-administrator. Yet it could just as well mark the start of a new era of interaction sterile between the two rivals. And the hope of reform might well lead to the gracious slaughter of a Verdun front by memoranda, with white flags and deft political manoeuvring.

Guy Neave

The author is research fellow at the Institute of Education of the European Cultural Foundation, Paris.

Pauline Kirk looks at the problems facing some women taking part-time degrees

Female students and the Open University

By its size alone, the Open University has great potential for social change. One aspect of this potential which has interested me since I joined its part-time staff in 1970, is the opportunity it offers women to obtain higher education. In 1974 I began research into the problem of female students and, after making an appeal for correspondence on this topic in the university's newspaper, *Sesame*, have gathered a growing dossier of letters, telephone calls and comments made at study centre meetings. It is on these, and my experience as an OU tutor and counsellor that I base the following suggestions, though to preserve the confidentiality of my sources, I shall not give their real names.

First, one needs to make clear the large numbers involved. More than 21,000 adults have already graduated from the Open University and a further 60,000 are studying with it at present. Even if the ratio of male to female corresponded to the national average, this would represent a lot more women obtaining a degree than would have done so otherwise. (For example, the report of the Venables committee, published in December, 1976, gives the following figures for 1974-75 represented as a percentage of the whole population: students in polytechnics: male 0.7, female 0.1; students in universities: male 0.8, female 0.3.)

In fact, in the Open University, the number of female applicants climbed from 30 per cent of the total in 1970 to 41.9 per cent in 1976—20,210 women out of a total of 48,234. There has been a similar increase in female graduates. In 1972, the first year the University awarded degrees, only 21 per cent of its graduates were female; in 1976 this figure has risen to 41.9 per cent. Thus, in 1976 alone, the University produced 2,133 women graduates, all of whom could be considered to have received a second chance at higher education.

The comments made to me suggest that for many of these women, the experience of studying releases them from traditional restrictions, and stimulates personal development. As one wrote:

"In spite of the problems, the benefits have so far outweighed the disadvantages. My horizons have been widened, I have discovered things about myself I didn't know, I have a far better grasp and understanding of all kinds of disciplines, and it has given me confidence in areas where I had little, or none."

This is particularly true, I have found, of mothers with young children, who are frustrated "being tied to the house".

A second group, whose children are growing up, find their degree course fills the void caused by the loss of their maternal role. Jill wrote: "Although intelligent I am not anxious for a career as I feel I have one already. On the other hand when our youngest . . . is in his last year I will be 40 years old. Hopefully, I will then have at least 20 years of useful activity still to go . . . hence the Open University course."

The increased confidence which comes from leaving home and mixing with stimulating people is described in the OU's own career advisory literature. As a counsellor, I am increasingly meeting women who go on to full-time study after taking one or two OU courses, and already female graduates are teaching, or have returned to their alma mater as part-time staff. Others have obtained promotion within existing careers, or taken more interesting employment than they would otherwise have attempted. For divorced, separated, or widowed women, the OU can be a useful source of social contract, since it is one of the few institutions which does not assume a partner's presence, and, by offering home-based study facilities, makes it possible for a single parent to improve her employment prospects while her children are young.

Yet, while the opportunity for self-fulfilment may seem anyone's right, I have found OU study can cause female students serious problems. Some of these are practical, arising from the conflicting demands of home, career, and academic study, and are common to all mature students. With increasing career opportunities for women (in some sectors), many female students have to cope with just as demanding a career as male colleagues—though some male tutors and counsellors apparently do not appreciate this. One correspondent, for instance, wrote: "While at science summer school—and shortly to 'break down' under the strain—the resident counsellor assured me he 'envied' me my 'privileged' position.

In this respect, perhaps, female students' problems are more like those of their male colleagues than is often realised. The air hostess, who made 21 trips to Los Angeles in seven months, clearly had as valid a reason for being late with her written work as any hard-pressed businessman. One could also argue that in some cases such pressures are greater for a woman than for a man, since she is likely to be fighting for recognition. Frequently the decision to enrol for an Open University course seems to be an expression of the need to "go one better" than male competitors. Perhaps this is the reason why so many women students seem over-motivated, given to worrying over grades and examinations.

For a woman with a young family the pressures will probably be different—but no less severe since the career of housewife and mother can be exhausting. "Emancipation" has in some ways made things worse, for the wife may also be coping with paid work, or dealing with financial matters traditionally regarded among the middle classes as male preserves. The amount of work undertaken by some female students is breath-taking. Doreen, for instance, wrote to apologize for the lateness of an assignment:

"My basic problem I suppose is that I am being over-ambitious. I am taking two foundation courses in humanities and the social sciences. Also I'm a full-time housewife with three children, the eldest not yet six years, the next only just four years and the toddler is 17 months. I also have a little part-time job."

Many cope with one or more pregnancies during their degree, their domestic duties thus increasing as they approach higher-level study. That so many struggle on suggests the doggedness of their ambition. For them, study is obviously vitally important, but, in order to cope, they need a great deal of support and understanding from their families, as well as a measure of good luck. When these are lacking, study can become difficult. Doreen went on to explain:

"Study is just about possible when all goes well, but for more than the past four weeks I have had my husband completely laid-up at home with very severe slipped disc trouble. . . . The whole crunch of the matter is that I can only really study in the evenings and then only when I get a great deal of rest, physical help with the children, putting to bed, getting meals, etc, from my husband. All this help of course has gone by the board."

Even without such misfortunes, there are bound to be moments of depression, as there are for male students. Jan wrote: "How our marriage has been bent and our bedroom life battered. Too tired is my constant moan!" One can, of course, pass on practical advice concerning possible means of organizing time, or of arranging creche facilities with other students, but such ideas involve a measure of self-help, and clearly those who are outgoing enough to be active members of their local study centre will profit most from them. For the more housebound, either by circumstance or temperament, things are harder.

To outsiders, the determination of many women students to keep enrolling with the Open University must seem like a form of insanity, particularly as it costs money for them to do so, which they often have to earn by taking on more work. For some, the Open University seems to be a focus for many ill-defined and complex emotions, arising from a dissatisfaction with their role as housewife and mother, which society so badly undervalues. They seem to see their degree studies as a "justification" of their worth, and are therefore determined to prove that they can succeed. However, in this insistence on studying, some run the risk of causing domestic tension, much of which seems to arise from conflicting interpretations of the role that should be played by a married woman. Jill wrote:

"There is still an area where I find great difficulty and that is the one of woman's role in a marriage. It is this area that many in the Open University are struggling over. So much of the time we play the role of mother/wife or of husband/father that we can almost forget ourselves. The Open University gives one the opportunity to find oneself."

This "finding oneself" may lead a woman to challenge the assumption that her wishes are subservient to the good of her family, and in particular, her husband. Mary analysed this challenge:

"It seems to me that women with children find themselves lonely and bored in their home surroundings, with the result that they look around for a stimulating interest to fill a gap in their lives. Our manfolk can assume, because tradition encourages this, that if they wish to be away from home and spend money on leisure-time interests, this is acceptable. The situation is less straightforward for women. We haven't the blessing of tradition behind us, but we are asking to share the privileges that were once believed to belong to men alone."

However, even when the husband is sympathetic to this demand, prejudices often remain. Sally wrote:

"Unfortunately, while my husband is very happy for me to study, he has had the benefit of a traditional Irish upbringing—his mother still serves the men food before women and children—fight against those ingrained prejudices as he may—he certainly refutes them intellectually—I very much doubt if they can be completely eradicated. It shows itself in small ways like referring to exams as tests and tutorials as night school!"

In some instances such prejudices lead to unconscious selfishness. Mary continued:

"On the whole, I would say that my husband is fairly average in his attitudes. He encourages me with my work, but does not, I find, want to put himself out unduly on my account. He seems confused in his reactions. Some times he seem to be saying, from some unconscious part of his mind, that if I want to join the OU, good for me, but I must deal with the problems myself. Such problems include finding the money, finding a babysitter, finding the time, coping with tension . . . managing the children and coping with the tiredness that overwhelms me occasionally. He proposes to continue with his life, according to his own plans, and does not wish to debate the matter."

Such selfishness may become overt obstruction, and I have received some very bitter letters describing the domestic conflict which has resulted (if only in part) from Open University study, and in my experience this may lead to withdrawal. However, it may also lead to a hardening of the desire to succeed. Joan, for example, wrote to me:

"Men ought to realize (the old fashioned domestic tyrants that is) that life is different today. That women can't be thought of as second class citizens and that they want a decent interesting life not just chained to home like a dog. . . . Husbands are on the losing side if they want to suppress their wives' desire for education, and they deserve to be."

Others recognised that, in order to avoid conflict, it was best to maintain separate compartments between family and OU. Sue admitted: "I have tried to keep the work fairly unobtrusive, although this is by no means easy. I have missed units and cut down on reading, in order that others in the family shall not become aggravated by my new, absorbing activity". Some however, found the attitude of neighbours and relatives irritating, particularly when these were themselves female.

Further, the effect of traditional attitudes can probably be identified in the preference of women students to take the humanities and social science courses. In 1976 there were 5,555 male students and 6,262 female students registered for arts-based higher level courses, while in mathematics the figures were 5,407 males to 1,060 females, in science 3,824 males to 1,031 females, and in technology 6,990 males to only 534 females. One sees here the influence of the assumption that scientific subjects are for boys and a few rather odd girls.

Are the female students really incapable of studying maths, science and technology, or just frightened of them? The results obtained by those who attempt these subjects suggest the latter. In 1976 for example, in six out of 13 post-foundation technology courses a women student actually obtained a higher percentage pass rate than men, and in all but one of the others (which seems to have been particularly difficult for both sexes) over 50 per cent of women who finally registered obtained a course credit. It is also difficult to be sure women are as well informed as men about the opportunities provided by the university. A Harris Poll commissioned by the OU in 1971 showed that a lower percentage of women than men had actually heard of the university. As a result, advertisements have been specifically directed at female readers and viewers, improving the proportion from 26 per cent of the female sample in 1971 to 51 per cent in 1974, compared to 37 per cent of the male sample in 1971 and 58 per cent in 1974.

It seems, then, that the Open University's female students are both affected by traditional attitudes towards the higher education of women, and also, by their existence themselves, by their influence on their right to study, challenging these. For them, the OU, by serving as a focus for the dissatisfactions they feel, may be acting as the kind of consciousness-raising stimulus which some need to be taken to harness research expertise by injecting greater efficiency and professionalism into university research through the establishment of a proper career structure? Fourth, how and to what extent should university research be made publicly accountable? No doubt there are other issues but these, at least, would have served as a realistic beginning.

Brian Salter

Brian Salter is research fellow at the University of Sussex.



Women at an Open University seminar.

Research: why there has been no revolution

In its recent series of leader articles, portentously entitled "The Research Revolution", the *THES* shrewdly reflected just about all the prevalent misconceptions of universities research. It made disinction that do not matter, ignored those that do and provided a formal for the future which had the single merit that it would be impossible to implement. For those engaged full-time in university research (18 per cent of the universities' total academic staff) the articles were simply irrelevant. Why?

To start with the most obvious. The *THES*'s functional justification for research was that it provides both an apprenticeship prior to admittance to the academic caste (i.e. teaching) and promotional criteria once in it, aids morale and may improve the quality of undergraduate teaching. This completely ignores the increasing numbers of researchers who see themselves as committed to a career in research rather than as individuals who, if they get lucky, may one day become teachers.

Even so, the realisation that university research could and should be a career in its own right has been slow to grow. (Recent manifestations of its emergence have been the setting up of a research careers exploratory panel by the SSRC and a series of seminars under the aegis of the Association of Social Research Organizations which may lead to the creation of a professional association for social researchers.) This is not entirely surprising. Short-term contracts coupled with an anarchic funding process are not guaranteed to enhance a feeling of professional security.

Whence the difficulties of *THES* arose was in its reliance on an obsolete model of the relationship between research and the university. Namely, that the teacher-scholar gathers knowledge and "through the process of discovery and introspection" ensures that "our intellectual culture is transmitted to the rising generation". As Ralph Dahrendorf remarked (*THES*, May 13, 1977), "The idea of universities embodying the unity of teaching and research is beautiful and unrealistic."

The proposals for reforming that "still chaotic substance", as the *THES* describes university research, are themselves little short of anarchy in action. The idea that research funding should be decentralized to the level of individual universities to allow the operation of a "competitive market place of ideas" is quaintly nineteenth-century in its belief in the benefits of laissez-faire funding but scarcely twentieth-century in its awareness of the administrative complexities of the modern university.

Nor is the paradoxical proposal, that reformed research councils should have greater powers to represent the national interest, convincing. How are the councils supposed to have greater powers when as *THES* suggests, they should at the same time have less money and more circumscribed briefs to protect the autonomy of the universities?

Had *THES* taken time to investigate the true state of research in the universities rather than relying on outdated mythology, it would have found that there has been no research revolution but, rather, an incremental and minimal adjustment to the inevitable which can scarcely be classed as evolution. It would have had to face a number of issues.

First, what guidelines need to be established to rationalize the present diversity of funding processes? Second, what should be the relationship between university research and that conducted by other agencies such as central government, local government and independent institutes? Third, what steps need to be taken to harness research expertise by injecting greater efficiency and professionalism into university research through the establishment of a proper career structure? Fourth, how and to what extent should university research be made publicly accountable? No doubt there are other issues but these, at least, would have served as a realistic beginning.

Brian Salter

Brian Salter is research fellow at the University of Sussex.

Colleges of Further Education

STRANMILLIS COLLEGE, BELFAST

PRINCIPAL : JAMES POMFRET, M.A., B.Sc., M.Ed.

Stranmillis College is wholly concerned with the preparation of men and women for teaching in nursery, primary and secondary schools, mainly through B.Ed. Degree courses of 3 and 4 years. There is a three year Certificate course in three shortage subjects only, and a post-graduate course.

The College is non-denominational ; there is no religious test. In September next there will be about 920 students. The College is pleasantly situated in an attractive wooded estate of some 45 acres, in a quiet residential neighbourhood on the southern outskirts of the City of Belfast. New building projects to the value of £21 million have been completed in recent years.

LECTURER OR SENIOR LECTURER IN HANDICRAFT

Applications are invited from men for the appointment from 1st September, 1978, with good qualifications and teaching experience, possibly in Applied Science, Technology and Craft Design. Other qualifications will be considered. There are courses for the Certificate in Education and for the B.Ed. General Degree with Handicraft as a main subject.

Salary Scale :
£3,279 to £6,417 plus £492 under first two stages of the Pay Code, with a further review expected from April 1st. Placing initially according to experience.
Assistance with removal expenses from outside Northern Ireland.
Further information about the College and appointment, and a form of application may be obtained from The Secretary, Stranmillis College, Belfast BT9 5DY.
Applications should be received not later than Friday, 17th March, 1978.

SCOTTISH COLLEGE OF TEXTILES

A Central Institution of Higher Education

LECTURER in FASHION

Applications are invited from appropriately qualified persons for the above post which involves teaching aesthetic and technical Clothing Design, as well as Design Management to "sandwich" and full-time students preparing for the Part I and Part II final examinations of the Clothing Institute.

Experience in designing and cutting patterns for industry and previous teaching experience would be an advantage.

Application forms obtainable from :

The Principal,
Scottish College of Textiles,
Galashiels, Selkirkshire TD1 3HF
(Tel. Galashiels 3351)

should be returned completed by Wednesday, 8th March, 1978.

DURHAM COUNTY COUNCIL
NEW COLLEGE DURHAM
Faculty of Technology

Head of the School of Mining

Applications are invited for the above post which carries the rank of Principal Lecturer from graduates (or persons of graduate-equivalent status) in mining engineering with a First-Class Certificate of Competency and with relevant experience in the coal-mining industry and in teaching to at least HNC level.

The Head of the School is responsible to the Dean of Faculty for administration of the school which comprises 14 members of staff. Courses include Mining Technician Diploma and Technician and Higher Technician Certificates in Mining, Mining Electrical and Mining Mechanical. Duties could commence immediately.

The College is an institution of Higher and Further Education and is a centre for advanced mining courses in the North-East.

Salary scale : Burnham report, 1977, £6,432 to £7,134.

Further particulars of the post together with a form of application may be obtained on the receipt of a stamped addressed foolscap envelope from the Principal, New College Durham, Nevilles Cross Centre, Durham. Closing date for receipt of the application is March 25, 1978.

Appointments Wanted

PURE MATHEMATICIAN
age 37, M.Sc., D.Phil.

Four years' teaching experience, two at Oxford University and two at American University. Publication list. Seeks post for teaching or research position. Lectures and curriculum vitae available on request.

c/Wkly Rec 0677V, T.H.E.S./ The Times, W.C1X 8EZ

LANCASTER
St. Martin's College

Applications are invited for the post of

LECTURER/SENIOR LECTURER IN MODERN HISTORY

to teach to B.A. Hons. level.

The post is to commence on 1st September, 1978. Candidates should have high academic qualifications and a particular interest in late 19th and 20th century European or world history.

Further details and application forms may be obtained from The Principal, St. Martin's College, Lancaster, LA1 3JD.

Application forms to be returned by 15th March.

Librarians

DORSET
COUNTY COUNCIL

DORSET INSTITUTE OF HIGHER EDUCATION

ASSISTANT LIBRARIAN
Bournemouth : Post HEB 4b

Dorset Institute was founded in 1976 and its recently established Learning Resources Centre provides an integrated library service to students at all college sites.

At Bournemouth the L.R.C. combines traditional library services with facilities to meet the demands of audio visual materials and modern learning situations. The L.R.C. houses some 25,000 books, 650 current periodicals and 200 study places including audio-visual carrels, tutorial room, etc. The student population served consists of courses mainly in arts, humanities, business studies, catering and tourism—all at degree or H.N.D. level.

We are seeking an experienced Chartered Librarian who will be responsible to the Institute Librarian for:

The work of the cataloguing section for classification and cataloguing of all items held on audio-visual materials.

Assisting with reader services and inquiries.

Salary on Grade A(1) £5,802 for incumbents to £7,314 (inclusive of supplements).

Application forms returnable by March 10 and further details from Administrative Officer, Dorset Institute of Higher Education, Wallisdown, Poole, BH12 5HH, (please quote post number).

LONDON
TRINITY COLLEGE OF MUSIC

LIBRARIAN

The post of LIBRARIAN has previously been combined with that of Secretary to Governors. It is now desired to appoint an Independent Librarian.

Starting salary will be within the £4,000 to £5,400 per day range. Working hours 10-5, Monday to Friday. Four weeks' holiday. Pension Scheme.

Applications from Chartered Librarians of either sex with part-time experience of Music Libraries preferred.

Telephone Principal's Secretary (01-359 8773) or write to Trinity College of Music, 11/13 Mandeville Place, London, W1M 6AQ, for application forms. Closing date for receipt of application 3rd March.

'A' LEVEL BIOLOGY FIELD COURSE—EASTER 1978

25th to 29th March.

Led by highly qualified staff, the course will cover theory and practical field work on Shetness, Burrafirth, Hoevs and mainland.

Details : COUTTLANDS (Ref. BIOL), Kingsbridge, Devon. Telephone : Luddiswell 237.

Administration

THE BRITISH SCHOOL AT ROME

Appointment of Administrator

Applications are invited from British, Commonwealth or Irish subjects for the post of Administrator (in Rome), vacant autumn 1978. The British School is a postgraduate institute for humanities research and the promotion of practising arts. The Administrator will have administrative responsibilities under the Director. Information and application forms, which must be completed and returned by March 23, 1978, are obtainable from the Hon. General Secretary, The British School at Rome, 1, Lowther Gardens, Exhibition Road, London SW7 2AA. (Telephone 01-589 3666.)

SALFORD
THE UNIVERSITY

REGISTRAR'S DEPARTMENT (ADMINISTRATION)
ADMINISTRATIVE ASSISTANT

Applications are invited from GRADUATES or holders of an equivalent qualification for the post of temporary Administrative Assistant in the Academic Division of the Registrar's Department. The person appointed will be responsible for the administration of short advanced courses, a number of general duties, the period of the appointment will be nine months from April 1, 1978.

Salary according to qualifications and experience within the Rate C1,504 to £6,627 p.a.

Further particulars from the Registrar, University of Salford, to whom letters of application giving details of age, qualifications, experience and present salary and addresses of two referees, should be sent by March 3, 1978, quoting reference A.50/1178.

Courses

BRUNEL
THE UNIVERSITY

Full-time and Part-time M.Sc. Courses in

MATHEMATICS

The full-time courses last for 1 year from September. The part-time courses require attendance on 1 day per week for two years. Both courses are designed for students qualified in fields such as mathematics, engineering or physics.

(1) NUMERICAL ANALYSIS

Topics will include: functional analysis; linear algebra; approximation theory; applied numerical solution of ordinary differential equations; numerical solution of partial differential equations of physics and engineering, particularly by finite element methods.

Machine problems on the University's computers form an integral part of the course, which has S.R.C. support for their Advanced Course Studentships.

(2) MATHEMATICS WITH APPLICATIONS

This new course will include: differential equations, applied algebra, Galois theory, functional analysis, optimization theory, and other mathematical topics, as well as options in the fields of Systems engineering, Cybernetics, Numerical analysis, and Stability and C.F.D.

Details from (1) Dr. N. Papamichael, (2) Dr. A. Iserles, Department of Mathematics, Brunel University, Uxbridge, Middlesex.

Colleges and Departments of Art

BROMLEY
London Borough of

RAVENSBOURNE COLLEGE OF ART AND DESIGN

SENIOR LECTURER—FURNITURE DESIGN

Applications are invited from practising furniture designers with experience of teaching to the Advanced post in the School of Three Dimensional Design. Further details and application forms from the Registrar, Ravensbourne College of Art and Design, Walden Road, Chislehurst, Kent (tel. 01-468 7171).

Closing date for applications, one month from the appearance of this advertisement.

WALES
THE UNIVERSITY COLLEGE ABERYSTWYTH

GRADUATE STUDIES IN INTERNATIONAL POLITICS

The Department of INTERNATIONAL POLITICS offers two courses :

STRATEGIC STUDIES

A study of the military dimension of state policy, including deterrence, conventional and unlimited warfare, alliances, arms control and disarmament, political uses of the armed forces, defence policy and the history of strategic ideas.

BRITISH FOREIGN POLICY IN THE TWENTIETH CENTURY

An analysis of the major trends in the content and making of British foreign policy since 1945, with additional courses in the following specialisms :

Anglo-American Relations ; Britain and Europe ; Decolonisation ; British Defence Policy ; British Policy towards the Middle East ; Anglo-French Relations ; Anglo-Russian Relations.

The course extends over 12 months and leads to the degree of M.Sc. Econ. The examination consists of three papers and a short thesis. The courses are recognised for SSRC awards.

For application forms and further details write to the Department of International Politics, University College of Wales, Aberystwyth, Dyfed (tel. 0970 3111, ext. 3234.)

Research Posts

THE OPEN UNIVERSITY

Research Appointments

Assistant Scientific Officer
Engineering Mechanics

We are looking for a graduate (or holder of an equivalent qualification) to assist members of the academic staff with their research work. He or she should preferably have a background in mechanical engineering and experience of working in a research team, and of organising research. A knowledge of mini-computer programming and hardware is essential together with some experience of practical instrumentation. He or she must be able to work without supervision and will be able to call on the assistance of technicians and the services of the workshops. The successful candidate will be encouraged to play a vital part in starting new research projects appropriate to the interests of the Engineering Mechanics discipline. Ref. (EM2).

Assistant Scientific Officer
Tactile Diagrams

This is a temporary post, for one year only. It involves the creation of tactile material for blind students studying at the University. This will entail the assessment of select course material for translation into tactile form, the building of master diagrams and the reproduction of copies using a Thermoform duplicator, and the evaluation of the effectiveness of this material to the visually impaired student's study.

Applicants should have good educational qualifications and preferably some experience of working with visually impaired people. Some practical ability would be useful, but the successful applicant will receive training at the National Mobility Centre, Birmingham, in the appropriate diagram and map-making skills. This post is unusual in English Higher Education and presents exciting opportunities for the development of new techniques for the teaching of visually impaired people. Ref. (TD2).

Salary for both posts will be on the 18 scale for Research and Analogous staff, currently £2,904-£4,198 but under review. Plus pension benefits, over six weeks' holiday and good social and sporting facilities. Application forms and further particulars are available by post card request please, from the Personnel Manager, The Open University, P.O. Box 76, Walton Hall, Milton Keynes, MK7 6AL, or by telephone from Milton Keynes 63868 (24-hour answering service). Closing date for applications : 10th March, 1978.

MANCHESTER
THE UNIVERSITY

INSTITUTE OF SCIENCE AND TECHNOLOGY

CONTROL SYSTEMS CENTRE/MECHANICAL ENGINEERING DEPARTMENT

SPECIAL RESEARCH ASSISTANT

Applications are invited for an externally supported Special Research Assistant post in the field of Ship Propulsion Control. The project will embrace simulation, analysis and control system design similar to the successful application of microprocessor control to marine propulsion. The successful applicant, male or female, will have a good honours degree in engineering, physics or mathematics and preferably a higher degree. The appointment will be made on the salary range £3,904 to £5,100 per annum depending on age and experience.

Applicants should send full curriculum details and the names of two referees to the Registrar, The University, Oxford Road, Manchester, M13 9PL, quoting reference No. 3/1/100, by 28th February, 1978.

LONDON
UNIVERSITY COLLEGE AND SUNY AT BUFFALO

Joint training and research programme in computer and information sciences.

The Department of Computer Science at University College London and the Department of Computer Science at the State University of New York at Buffalo offer a training and research programme in the design and application of computer systems for the management of large collections of information or data. Funds can be made available for a period of up to three years following the successful completion of a suitable doctoral research programme leading to the degree of Doctor of Philosophy. Suitable graduates should have a first or upper second class honours degree in computer science, mathematics, physics, planning or a related discipline.

For further information please write to Dr. P. Wood at University College London, Gower Street, London WC1E 6BT.

Overseas

OVERSEAS TEACHING POSTS

ASSISTANT PROFESSOR (TEFL)

(LEBANON)

American University of Beirut, English Department and Education Department
Duties : to teach, with other staff, courses in Phonetics, Grammar, History of English Language, etc. Graduate courses in Linguistics, to take seminars in TEFL and co-ordinate problems.
Possible departmental committee work.
Qualification : PhD in Applied Linguistics.
Salary : US$12,000-US$14,000 pa.
Benefits : Settling-in grant, children's education allowance, baggage allowance at beginning and end of contract. Three-year contract, renewable.
78 WU 10

HEAD OF RESOURCES DEPARTMENT

(GHANA)

Kumasi Teacher Training College.
To develop and teach a course in Educational Technology, to encourage staff to develop teaching materials and to organize the Resource Centre as a development centre for technical institutions.
Degree and at least five years' experience in an Educational Technology Unit in tertiary education essential. Diploma in Educational Technology an advantage.
Salary : £4,589-£5,618 pa.
Benefits : free furnished accommodation; overseas and children's allowances ; two-year contract, possibly renewable.
77 CT 5

HEAD OF SCIENCE

(GHANA)

St Paul's Secondary School, Denu.
To teach Physics to " A " level, Physics and General Science to " O " level, and organize the Science Department.
Degree in Physics or with a Physics component and five years' teaching experience including " A " level Physics teaching essential. Teaching qualification and Head of Department experience desirable.
Salary : £4,010-£5,580 pa.
Benefits include free furnished accommodation ; overseas and children's allowances and superannuation. Two-year contract, probably renewable.
78 RS 8

LECTURER IN ENGLISH

(BRAZIL)

Linguistics an dat least two years' relevant
Required for August, 1978.
Duties : to teach English Language to undergraduate and postgraduate students.
Qualifications : MA in English or Applied Linguistics and at least two years' relevant experience. PhD highly desirable.
Preferred age range : over 30.
Salary : £4,589-£5,618 pa.
Benefits : Overseas allowances ; free accommodation ; medical scheme ; employer's portion of superannuation ; two-year contract, renewable.
78 PU 23

LECTURER IN ENGLISH

(BRAZIL)

Federal University of Parana, Curitiba
Required for August, 1978.
Duties : to teach English Language and Linguistics to postgraduate students
Qualifications : PhD or MA in Linguistics and relevant experience overseas. ELT qualification desirable. Preferred age-range : over 35.
Salary : £4,589-£5,618 pa.
Benefits : Overseas allowances ; free accommodation ; medical scheme ; employer's portion of superannuation ; two-year contract, renewable.
78 PU 24

EXAMINATIONS OFFICER ; HEAD OF TEACHER TRAINING DEPARTMENT ; TEACHERS OF ENGLISH

(BRAZIL)

Sociedade Brasileiro de Cultura Inglesa.
Required for July, 1978 :—
Examinations Officer with Postgraduate degree/diploma in Applied Linguistics or TEFL and major interest intesting ; three years' experience teaching overseas, preferably involving administration and test material preparation required.
Salary : Cr$18,000-Cr$24,000 per month.
Head of Teacher Training Department with Postgraduate degree/diploma in Applied Linguistics or TEFL, five years' experience of teacher-training and teaching in an overseas context required.
Salary : Cr$20,000-Cr$24,000 per month.
Four Teachers of English with Postgraduate TEFL degree/diploma ; three years' teaching experience, preferably overseas, required.
Salary : Cr$14,000-Cr$20,000 per month.
(Current rate of exchange : Cr$27=£1.)
Benefits : annual bonus, currently £800 ; installation grant, £110 ; employer's portion of superannuation contribution ; medical scheme ; two-year contract, renewable.
78 PO 12-17

MARINE TECHNOLOGISTS

(VENEZUELA)

Department of Marine Technology, Colegio Universitario de Carupano.
One Project Coordinator required for May, 1978 and **Two Lecturers** required for July, 1978, to lecture in Shipbuilding and Marine Engineering.
Candidates must have ONC/HNC Naval Architecture or CGLI Shipbuilding Technicians' Certificate Part III ; or ONC/HNC Engineering and/or DOT First-Class Certificate of Competency (Motor).
Experience in shipyard or marine engineering and a willingness to learn Spanish essential (tuition provided).
Project Coordinator : Experience of course development and educational management essential.
Salary : £8,038-£8,350 plus overseas allowances.
Lecturers : Some teaching experience desirable.
Salary : £6,210-£7,054, plus overseas allowances.
Benefits : Free accommodation, medical scheme, superannuation, initial two-year contract.
78 PU 20-22

Return fares are paid. Local contracts are guaranteed by the British Council.
Please write briefly stating qualifications and length of appropriate experience, quoting relevant reference number and title of post, for further details and application form to The British Council (Appointments), 65 Davies Street, London W1Y 2AA.

THE BRITISH COUNCIL

General Vacancies

EDITOR OF SCREEN

The Society for Education in Film and Television requires an EDITORIAL OFFICER whose main responsibility will be the editing of the magazine screen. This is a part-time post whose hours and salary are under review. At present the salary is £5,100 to £5,700 approximately for 3 days per week.
For further details contact Miss P. Hill, Society of Education in Film and Television, 29 Old Compton Street, London W1V 5PL. Closing date for applications is 17th March.

LEICESTER
THE POLYTECHNIC

SCHOOL OF BUILDING, SURVEYING AND LAND ECONOMY
Post No. 106

Applications invited from suitably qualified persons with experience in Building Surveying for the post of PRINCIPAL LECTURER to teach on to degree level courses in Estate Management.
Salary £5,744-£6,447 (basic-£6,903 per annum inclusive of superannuation). Point of entry dependent upon qualifications and previous experience.
Further particulars and application form available from the Secretary, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH. Tel: 553555 (extension 2401).

LEICESTER
THE POLYTECHNIC

SCHOOL OF MANAGEMENT

LECTURER GRADE II/SENIOR LECTURER IN PRODUCTION MANAGEMENT

(Post No. 337)

required to teach on a range of programmes, including undergraduate, post-graduate and post-experience courses.
Applicants should have suitable qualifications and experience.
Salary £5,744-£6,447 (bar-£6,903 per annum inclusive of supplements).
Application forms available from the Staffing Officer, Leicester Polytechnic, P.O. Box 143, Leicester LE1 9BH. Telephone: (0533) 553555.

ETH Zürich

The Swiss Federal Institute of Technology in Zurich and the University of Zurich invite applications for a professorship in

Human Geography

The duties of the new professor include teaching, at both undergraduate and graduate levels, and research in Human Geography, with special emphasis on practical application. The candidate should have several years of experience and proven ability to perform and direct research. He will be expected to cooperate with various groups in both institutions. Applications, with curriculum vitae and list of publications, should be submitted before April 30, 1978, to Professor H. Ursprung, President, Swiss Federal Institute of Technology, CH-8092 Zurich.

General Vacancies

ADVISER-WRITER (EFL)

Longman English Teaching Services

seek for their ELU on Adviser-Writer who will act initially as an adviser on EFL materials for Europe and Latin America.

Previous experience of teaching at and preparing materials for both secondary and/or adult levels is essential. Ideally this will have been obtained in a country of the Mediterranean or Latin America.
A post-graduate qualification in applied linguistics and/or education would be an advantage.

The post is based in Harlow, Essex, but would involve foreign travel connected with the development of materials for a particular area.

For further details and application form please contact :

Mrs. S. Etherington,
Assistant Personnel Manager,
Longman Group Limited,
Longman House,
Burnt Mill, Harlow,
Essex, CM20 2JE.
Tel: 0279 26721.

Longman

ilea INNER LONDON EDUCATION AUTHORITY

District Inspectors (2)

Salary range £8868.80 – £9734.80
(inclusive of London Weighting and Phase 2 Supplement with possible progress to £10,640.80)

These posts involve oversight of a district of Inner London and advising on and inspecting education mainly in primary and secondary schools and some special schools.

Candidates must be well qualified and have had substantial teaching experience in schools, and have carried a high level of responsibility. The successful candidates will also be expected to devote about one quarter of their time to working more generally in Inner London in a team of specialist inspectors, under the leadership of a senior inspector.

Applications from candidates with qualifications and experience in any discipline will be considered.

Details and application forms from the Education Officer (EO)Estab 2A(f) Room 367, The County Hall, SE1 7PB. Please enclose a stamped addressed foolscap envelope.
Forms to be returned by 13 March, 1978.

TIMES PAST
THE TIMES
HIGHER EDUCATION SUPPLEMENT
New Printing House Square, London WC1X 8EZ. Telephone 01-837 1234

Let sleeping dogs lie

The decision of the Inner London Education Authority to "fine" two of its polytechnics for failing to reduce their number of overseas students as they had been instructed is certainly legal. Not even the authority's most bitter critics deny that. The ILEA's decision will also probably be ineffective. Not even the hawks among the authority's members and officers believe that there is any reasonable way in which the two recalcitrant polytechnics can be deprived of this money for very long.

But is this decision legitimate? This, rather than the temporary destination of the £100,000, is the important question raised by the dismal dispute between the ILEA and Thames and Central London Polytechnics. After all this dispute in London merely represents in an acute form the chronic disagreement between Government and local authorities on the one hand and on the other universities, polytechnics and colleges on the proper level of overseas students, which in turn has raised the fundamental question of political power and academic autonomy.

No one has defined with any precision what are the prerogatives of politicians with regard to higher education. In the case of the universities this omission has been deliberate with the UGC fulfilling a double role, both as confidential adviser to the Government and as an independent agency to distribute the grant. This lack of clarity has had fortunate results. It probably has enhanced academic autonomy and diminished political power.

In the case of the polytechnics—which, of course, were created with the deliberate design to be entirely publicly accountable—there is in theory a clearer separation of powers between local authorities, governing bodies, and academic boards. Indeed the present Secretary of State when she was a junior minister in the DES worked very hard to see that the polytechnics were granted as much freedom as possible in their instruments and articles of government. In practice, however, the confusion of roles is almost as great as in the universities. Indeed some would say it is greater because the polytechnics have had less time to develop informal codes of good practice to guide them in this most delicate relationship.

But if the border land between these two remains undefined, there seems to be no difficulty in defining their respective heart lands. The politician has the duty to decide how much higher education to provide, its general character, its cost and how the money is to be raised. The academic has the right to decide which individual students should be admitted and how they should be taught subject to the collective policy of the autonomous institution in which he works. It seems clear and simple.

In fact the present London dispute has shown that it is neither. The ILEA feels it has the duty to ensure that the higher education offered in the polytechnics and colleges under its control is appropriate to the needs of Londoners. The authority has become alarmed at the very high levels of overseas students in some of its polytechnics and colleges. The institutions concerned feel that it is their right to admit students only on academic criteria. They therefore believe that the authority's instruction to them to reduce the overall number of overseas students is a threat to their legitimate autonomy. At a national level there is a similar conflict between the Government which feels it has a duty to see that higher education as a whole is appropriate to the needs of the nation, hence its concern to see that the demand for undergraduate places from home students receives priority, and the universities which believe that both the overall level and the actual numbers of overseas students in individual institutions should be left to their good sense.

Five years ago that would have satisfied everyone including the Government. On most issues it still would today—but not on the question of overseas students. Indeed it is because the Government (or the ILEA) feels it cannot rely on the "good sense" of individual universities and polytechnics that it has adopted a more interventionist role. That is the first lesson to be learnt from the bitter dispute in Inner London (and the more civilized disagreement at a national level): higher education in Britain is paid for almost entirely with public money which means that it must accept political constraints. It can be argued that universities and polytechnics acted in defiance of these political constraints when they unilaterally and probably unintentionally altered the previous balance between home and overseas students.

Certainly by altering this balance they made the proportion of overseas students in British higher education a live political issue in a sense that it had not needed to be while the balance remained a stable and historical feature of our system. Now that it has become, however inadvertently, a political issue, who should have the last word? Our reluctant conclusion is that it must be the Government for higher education as a whole, and a local authority in the case of the colleges it maintains. If we support the democratic character of our State and reject the corporatist alternative, then we must accept that the ultimate and legitimate authority must be in the hands of the representatives of the people. They must be the sole judges of the public interest. Having accepted that it is difficult not to accept that the balance between home and overseas students is one of those basic characteristics of any system of higher education over which the Government must be granted ultimate discretion.

The second lesson to be learnt is that Government is ill-equipped to intervene in higher education. It has no mechanism it can easily use to see that its wishes are actually carried out. There are great dangers arising from this. On the one hand determined Governments or local authorities (like the ILEA) may impose crude remedies that simply will not work in terms of detailed admissions policies, staffing patterns, and the viability of courses or even departments. Even when they are not asking for the impossible, they may—unwittingly—be asking for the highly undesirable.

On the other hand higher education, conscious of the practical impotence of the Government, may choose to ignore the latter's clearly expressed wishes. This would be equally unfortunate. Either the Government's frustration at its own impotence would be translated into a general prejudice against higher education, or else it would act as a powerful incentive to develop the agencies of intervention that the Government at present lacks.

The only reasonable conclusion to draw from the dispute in Inner London is that it is rarely going to be in the interests of higher education to make an issue of academic autonomy. Far more autonomy can be enjoyed quietly than would ever be formally allowed. Universities and polytechnics of course should not be political neuters nor should they fail to complain when they asked to carry out impossible policies but at the end of the day they must accept the political constraints inherent in a publicly provided system of higher education. Indeed rather than having to bow to superior power at the end it is often better never to raise an issue in a political context at the beginning. Above all it is important to see this debate in proper perspective. British higher education, polytechnics as well as universities, enjoys a very large measure of independence by international standards. Some of the world's greatest universities are subject to much more detailed control than Thames or Central London Polytechnics have to suffer at the hands of the ILEA. That independence should be cherished and protected. "Let sleeping dogs lie" may not be a brave policy to-day—but on the contrary, but it is often a sensible one.



LETTERS TO THE EDITOR

University and polytechnic salaries

Sir,—I am sorry to knock away what Ernest Rudd calls the crux of his argument. He has not realized that the statistics published by the Department of Education and Science which purport to show the numbers of staff in polytechnics who hold degrees and those who do not are misleading, perhaps seriously so. For some years they have been regarded with amused disbelief by those who are in a position to know something about it and they have recently been directly challenged by a number of us who cannot reconcile them with our own observations. It should perhaps be more generally known that as a result the DES has now agreed that such a table will not be published in future because its accuracy cannot be guaranteed.

The perhaps rather surprising point simply is that those compiling the statistics do not have the information which the table claims to summarize; oddly enough, the local authorities who employ most of the teachers in polytechnics and are therefore expected to know do not seem to be very good at maintaining up-to-date personnel records. They do it when there is a statutory requirement—for example for teachers in schools, whose salaries must relate to their qualification—but not, apparently, otherwise. And of course no one thinks of asking the people who do know—the institutions themselves.

As a result, and as an example of the extraordinarily naïve and quaintly uncritical attitude of the local authority and DES statisticians, the *Statistics of Education* solemnly recorded a few years ago that of the 30 polytechnic directors, eight were non-graduates, a figure disproved almost at a glance. When the chuckles had died down at CDP we mildly asked the DES if they believed their own figures; we noticed that for later years these particular figures were revised, but no correction was ever published and the finding of the true facts about the other 13,000 staff has not been attempted. I do not complain about this, because I do not know what use the information is when you have it; but it is, I think, unfortunate that the unchecked statistics have repeatedly been published.

For what it is worth, and simply to illustrate how misleading the DES figures are, 92 per cent of the academic staff of this polytechnic have first degrees and nearly 70 per cent have higher degrees, and the small number of non-graduates (most of whom have qualifications generally regarded as equivalent to degrees) includes some distinguished people in their professional fields.

The CDP did a survey a couple of year ago which showed that, for 27 polytechnics, 73 per cent of teaching staff were graduates, 37 per cent having higher degrees, and 19 per cent held qualifications recognized to be degree equivalents. All this is a far cry from the DES tabulation which suggests a 40 per cent non-graduate category.

But the whole argument based on qualifications is in a real sense irrelevant. The job of polytechnic teachers is one which requires no less intellectual application than that of those in universities. Some of it may be different from that of university teachers, but it is not for that reason less worthy or less demanding. I hope that we do not find it necessary to denigrate either the school teachers or the university teachers to support our salary claims.

Yours faithfully,
NORMAN LINDOP,
Director, The Hatfield Polytechnic.

Sir,—Mr Davinson (*THES*, February 10) accuses the Association of University Teachers of seeking to pull others down in their attempts to raise university salaries. No doubt this impression, which I fear may be widespread, has been generated because since Houghton a large number of apparent glaring discrepancies between salaries of individual university teachers and those of teachers in other institutions of higher education have occurred. It has been used in argument over the university salary anomaly. However, it must be stressed that official AUT policy is that colleagues elsewhere in higher education are by no means overpaid and that for them the Houghton award was a windfall; it is only that Houghton has highlighted the unjust levels of university salaries.

I have myself had the privilege of serving as an external examiner for CNAA degrees at three polytechnics and I can testify to the high skill, devotion and enthusiasm of all the staff I have met in their teaching and examining, often in the face of straightened facilities and accommodation. Certainly none of them is overpaid.

The tragedy of the failure of the Government to have university salaries reviewed at the same time as Houghton has obviously engendered many tensions. These tensions must be relaxed, preferably by a speedy removal of the university pay anomaly. However, even if that is achieved, there will be problems. Unless all higher education salaries are henceforward to be reviewed and settled not just by comparison one sector of it with another but also against pay levels in the rest of the public services (including, especially, the Civil Service), and indeed against those in the private sector too, there is a danger once again that all education salaries will soon fall behind just levels. Governments of all political shades have shown a tendency to damage education's interests so often that all those in higher education must be alert in countering this danger.

Yours faithfully,
A. M. PRICHARD,
Senior Vice-President, AUT.

Graduates at work

Sir,—Some years ago *The Guardian* published a letter in which I argued that university graduates were undervalued by society at large. I described them as intelligent and hardworking people who had made a considerable sacrifice of earning power in order to acquire intellectual skills which are badly needed in the national economy. That is still my view.

It was therefore pleasant to offer Tim Albert (The status of '75—where are they now?, *THES*, February 17) the chance to follow up some of our graduates, particularly as he saw nothing which is not on open access to all our present students. The reason we do regular surveys of graduates' experiences is to feed back information to those who have not yet started work. I agree with Mr Albert that the universities turn out people who are intelligent, questioning, articulate, and anxious to do well. I also agree that graduates are too frequently disappointed by their early experiences of employment.

Nevertheless, I fear that Mr Albert underestimates the difficulties faced by managers responsible for training young graduates. If it were easy to introduce the sorts of changes he envisages, I am sure it would have been done long ago.

Ours is now a nation suffering from hardening of the social arteries, and managers are victims of the system as much as anyone else. Almost all employing organizations are hamstrung by restrictive practices, which are methods of reducing the freedom of managers to make desirable changes. Many trade unions are quite powerful enough to prevent management from training graduates in ways they would prefer. It is significant that the two professions Mr Albert selected for praise (chartered accountancy and teaching) are both cases where professionally restricted people constitute "the labour force".

I believe that many non-graduates resent what they see as the privilege graduates have enjoyed: the best education the taxpayer can provide. Graduates in their first jobs have to be ready to demonstrate that they have achieved their position through superior ability and hard work, not favouritism. Lacking working experience they find this difficult, but their pleas for more training can be met only if other workers like the demands for yet more privilege. In this situation managers, who may be criticized by trades unions for recruiting graduates rather than promoting existing employees, dare not appear to show any favouritism.

Careers advisers can warn and discuss tactics, but only teachers can educate students in the application of intellectual techniques to unfamiliar problems. It is not too fanciful to see tackling a new job in a new environment as just another kind of educational project involving the well-tried methods of information-gathering, analysis, and decision-making. If more graduates could see it in that light more would succeed.

Yours faithfully,
W. W. SWEET,
Senior Careers Adviser,
University of Lancaster.

More's sacrifice

Sir,—Professor Denys Hay (*THES*, February 10) inflicts on Sir Thomas More a species of posthumous casuistry, an argument against his defiance of Henry VIII the like of which he resisted in his last days. The Henrician heresy was of a kind quite different from others of the period; it was dynastic, not dogmatic. Though the king, with some justice, felt entitled to remain styled *Fidei Defensor*, the usurpation of the General Council's authority by the secular power made any heresy possible and any subsequent reconciliation improbable. Events have amply justified More's view; the value of his sacrifice from the point of view of the Roman church is, perhaps, for it to assess.

Yours truly,
ROGER WALTER,
23 Christ Church Square,
London.

PNL sociology

Sir,—May I comment on the note by Simon Midgley under the heading "PNL Sociology Degree on Trial".

The correspondence upon which the report was based was leaked anonymously to the press. The report itself contains a misleading selective quotation and comment and was presumably conveyed because of the part it played in a conflict at PNL which has been widely reported and which we hope to put behind us.

Rather than acting to "try" a course, the CNAA has had regard to its proper function in order with its questions which are designed to ensuring that the degree programme continues to meet standards comparable with other courses validated by the council and with university degrees. In parts of the critical letter not quoted in your report the sociology board commended support and encouragement to the department and expressed confidence in the staff to counter the satisfactory resolution of the questions raised.

Those of your readers who do not work in institutions which operate courses validated by the council may be under the impression that a limited degree validation is a particular and exceptional process. This is not so, and at any one time there are many courses which, for a variety of reasons are in the process of validation. A change of department and course leadership, such as that at PNL, is but one such reason.

In my view the leaking of correspondence and the amplification in the press of selected quotations and comments is unlikely to assist us in our educational task.

Yours faithfully,
NOEL C. A. PARRY,
Head of department of sociology (designate),
The Polytechnic of North London.

Letters for publication should reach us by Tuesday morning at the latest. They should be as short as possible and the editor reserves the right to cut or append them if necessary.

Despite a pithy warning from Shaw the drift from European practice has continued

The British disease: professionalism

THE FUTURE OF ENGINEERING

In 1961 the American sociologist H. L. Wilensky wrote an article entitled "The Professionalization of Everyone". He noted how a series of commentators had wondered whether "the whole labour force is in one way or another becoming professionalized". Also, the Webbs and R. H. Tawney writing in Britain in the first decades of this century, held up professional responsibility and expertise as models for the trade unions and nationalized industries in their crude, prescriptivist days. Professionalism had become mixed in with description, and well-intentioned middle class observers were found hawking around the system of values amongst which they grew up.

Anglo-Saxon professional groups have been called "liberal" or "learned" or "free" professions, alternatively they are "lettered occupations", demanding evidence, by examination, of formal standards of training and common standards of practice. Some of the American writers, referred to by Wilensky, had been reviving talk of the professionalization of labour, arguing that "real estate dealers . . . barbers, bellhops, bootblacks, and taxi-drivers" were "easily professionalized". It was on the fact that hitherto "unlettered" occupations were starting to play the professional game that Wilensky's thesis was founded.

The "professionalization of everyone" thesis aroused a good deal of interest, although Wilensky refuted it in his article. He saw through the conceptual confusion of its proponents, and showed how the main characteristics of the Anglo-Saxon professions, "autonomous expertise and the service ideal", could not be adopted by most groups. Yet he failed, like most other students of the professions, before and since, to realize the limited character of the whole debate. Because the idea of "professions" does not really exist outside English, of the major European languages, the whole debate has been very partial in applicability.

The "professionalization of everyone" is only a proposition which makes sense in English-speaking countries; elsewhere, no one is a professional. This is not just an unimportant linguistic assertion. In fact, in the countries across the North Sea and the English Channel, differences from English-language usage are so great as to render quite different the way of life, through ways that people work and think about jobs.

There is a considerable literature on the Anglo-Saxon professions. Most of it argues that an occupation is only professional when it relates to a particular body of knowledge, or science, to underpin claims that certain jobs can only be done by members of the group. Second, members must display a certain sense of responsibility to the community. And third, the group takes in its discrete one, with definable boundaries for its work, and a specific set of skills in use. All criteria have to be met for an occupation to pass muster as a profession.

On the first criterion, profession P relates to Science X. Medical science is thought to be the appropriate body of knowledge for doctors; society generally accepts that there is a number of jobs which only those qualified as medical doctors can exercise. Yet the very notion of a special body of knowledge, relatively inaccessible to those outside the particular group, implies the monopolization of trade secrets. Hence the conflict with the basic scientific principle that the scholar's knowledge should be available to all.

The second criterion for professional status centres on responsibility to the community, exhibited overtly in a localized area. In places strongly affected by the lure of the professional ethic, individual solo groups like the Rotary Club. They lunch together conspicuously; they hold conferences conspicuously; with journals, codes of conduct, and offers of advice, they do "good works" conspicuously. So their reputation prospers. We do not claim that the good works are not done genuinely for the benefit of others. However, as in the case of the old dope peddler of the song, the element of "doing well by doing good" is ever present. More crucially, the overt stance of social responsibility is essentially towards the local community. So a manufacturer or an engineer, whose job is to produce useful goods for the markets of the world, does not act like an established professional.

From this argument, it can be seen that claims for professional status can be self-interested, and also readily abused. Part of the Wilensky line was that even the rat-catcher could exhibit features of professionalism, if only he tried hard enough. He could call himself "vermin technologist", "rodent scientist", or "wildlife control executive". He could build conversations stressing the socially-acceptable role of his job, taking his group's reputation far away from the bad old days in which the rat-catcher bred his own rats to distribute around so that his services would continually be required.

A "rodent operative", Oliver Greenhalgh, did, in fact, become a fellow of one English professional association, by satisfying its Council "as to the thoroughness of his knowledge" of their specialised affairs. In one respect at least he would have served his local community well; for, since he was a cat, he would be unlikely to have bred his own rats.

As the service sector grows, the scope for this kind of professionalism mushrooms. Reputations for social responsibility rub off from group to group, amongst individuals who go to Rotary Club together and are seen to be acting responsibly together.

Preoccupations, for groups of specialists, connected with the first and second criteria of Anglo-Saxon-style professionalism do not exist in France and Germany. From France, a key idea is *métier*, as in the name of the *Conservatoire des Arts et Métiers*, an institute set up for evening studies in Paris in 1796. Its aim was, and remains, to develop individual skills and to enable people to pursue their occupations more effectively. Significantly, the idea of "science" does not predominate in this educational aim; although, of course, subjects are taught at the *Conservatoire* which are parts of science.

The idea of a *métier* is a fairly simple one; and because English does not have an exact equivalent, the word is sometimes adopted directly by English speakers to make a point. Its use combines two English-language ideas, skill and occupation. It immediately conjures up the picture of active use of special and particular skills. The law provides a *métier*; but so do furniture-making, and working as a baker.

As we have argued, English-language usage points to a cut-off point, above which some occupations are professional and so rather special. Below this point, they are simply classed as "occupations", a much less inspiring term than the French "*métier*". Indeed "occupation" has overtones of someone filling in the day, waiting hopefully for the siren to go or the clock to creep up to five. In contrast, the idea that an individual possesses a *métier* suggests pride in the job and in the exercise of skills.

So, for France compared with Britain, one source of snobbery is absent where jobs are concerned. There is a range of *métiers*, each stressing specialization and development and use of skill. Of course, with or without the idea of professions, individuals in each country have a strong perception of ranking between jobs. A young Frenchman from one of the best *lycées* in Paris will rarely become a baker or a furniture maker. He will most likely become an engineer or a business economist, and in either case he may join the public service. If he fails in such an aim, he may decide to go to the university and become a lawyer or a teacher.

The primary meaning of the German idea of *beruf*, like the French *métier*, makes no reference at all to a rank order of occupations. Literally "calling", it includes notions of occupation, skill and speciality; but it is more complicated than the French idea. A secondary meaning of *Beruf*, however, does denote a higher group of occupations, peopled by those with whiter collars, cleaner hands and quieter habits, of the sort that a genteel landlady would prefer to let her rooms to. But even this secondary meaning of *Beruf* has little connection with English-language professionalism. The clean and quiet-living person in whom the Frankfurt landlady delights could just as well be an advertising man or a designer of machinery, as a lawyer or an architect. He could as well be concerned with *technik* (making things), as with *wissenschaft* (learning) or *kunst* (art). To make the impact he would not have to seem "learned" or bookish, or drop hints about the social responsibility of his calling. The differing attitudes to knowledge and differing conceptions of science are crucial to our thesis. Of course, French and German specialists use scientific knowledge in their jobs. However, science is thought of, in these cases, simply as a service to the specialist; access to a particular body of science is not taken to be a major feature of the job, as is the case for the professions in the English-speaking countries.

The notion of "science" used here is not that of the "two cultures" divide which allegedly separates "humanities" from the other forms of knowledge. It reached a point of pointless proliferation with the inclusion of the third group of quantity surveyors; Continentals seem to get on well enough without any group of them at all.

We revert to a British peculiarity of habit and response which is perhaps even more crippling than the proliferation of bodies and interest-groups already noted. By stressing a connexion with science and the esoteric, a professional group stresses the scholarly and clerical part of the whole range of tasks performed by its members. So higher British occupations are typically thought of as having white collars, sitting at a desk, writing reports, communing with a scientific muse. And British professionalism is knowledge-specific, with members given, by their particular "science", special powers of understanding.

Most jobs, however, are better done by activists than sub-day-observers. The competent activist cannot and does not fall into the trap of relating directly to a discrete body of knowledge, as the professional does. Instead he has to shop around.

On the Continent, the pull of science is less powerful, with an effect on how it is thought best to do a job. There, occupations tend to be skills-specific. The fact that the French notion of the term *métier* implies that activity, not just knowledge, is crucially important in a job.

Beruf is the same. The Frankfurt landlady will want a tenant who behaves well in his lodgings; but the man does not have to be desk-bound at work, or clerical in his dispositions.

Protagonists of the British tradition will point to the expressed responsibility of professional people. Yet the truth is that we are in an age of the need for interlocking responsibility between members of countless groups. The station-wagon worker or a doctor can all bring parts of society to their knees by withdrawing their labour. It is not necessary to have widespread professionalism, in the Anglo-Saxon mode, to accept this as the case. Indeed it could be argued from the view that German occupational groups generally been more responsible to their own society over the past 30 years than their British counterparts, at least as far as delivering the goods has been concerned.

Ironically, those French or German sociologists who have been diligent in the doctrinaire classic traditions of their forefathers, by helping to explode the myth of the Anglo-Saxon professions, have been bewitched by it themselves. Of course, they have had to borrow part of an English-language system of classification, or even to have written in English, to do so. Their own languages cannot readily incorporate the idea, nor their own cultures.

Until recently the idea of professions has been accepted without any serious demur by an English-language-dominated sociology of occupations, despite G. B. Shaw's pithy early warning that "every profession is a conspiracy against the laity". More significantly, it has given the English-speaking peoples, between the Outer Hebrides and the New Hebrides, between California and Calcutta, a needless proliferation of occupations. It has tended to make those occupations, which are above the salt, over-contemplative and underactive. So, it has contributed strongly to personal frustration and inefficient use of human and other resources. On balance we think it would have been better to have had, like the case of France, Germany and most of the world, the professionalism of no-one.



The learned professions recognized throughout Europe in medieval times: the law, medicine and the church.

Ian Glover is a lecturer in social science and humanities at the City University. Mike Fores, who is a civil servant, is writing in a personal capacity.

Mike Fores, Ian Glover

BOOKS

A theoretical insight into the crisis of literacy

The Philosophy of Composition
by E. D. Hirsch
University of Chicago Press, £6.30
ISBN 0 226 34242 5

America's vast area and its repeated waves of foreign immigrants have faced that country with a constant crisis of literacy—a crisis sensibly combatted by "English" requirements for naturalization and, at the level of higher education, compulsory Freshman Composition. Despite these efforts the crisis has not been overcome. On the contrary, since the advent of television, it has become more acute; and it is this "present crisis" that has converted Professor Hirsch, formerly a literary theorist of note, "from aestheticism to the more practical side of an English teacher's responsibilities".

A peculiarly American problem then? Once it might have been possible to think so; now it is almost impossible not to think that at all levels of education in this country too the quality of composition is bad, worsening, and ought to be bettered. Professor Hirsch argues that improvements in teaching and in learning composition skills must be preceded by the sort of fundamental theorizing that has been devoted to literature: by a philosophy of composition in short. An argument not invalidated by the fact that well-established rules-of-thumb turn out to correlate fairly well with the principles of the philosophy. For current practice is not merely underpinned as a result of this theorizing; it is also provided with paths to progress. Moreover, *en route* from philosophical questions about "the universal tendencies observable in the historical development of prose" and "the universal characteristics of good prose" to the concluding practical tips for teaching and for assessing the teachers and the taught, a number of academic and educational assumptions are found wanting.

Of particular interest, perhaps, is the evidence from several different disciplines which leads inescapably to these, among other, conclusions: first, that the inevitable decay of dialects before the advance of a national language of ever-increasing standardization in spelling, grammar, and pronunciation is to be welcomed and encouraged rather than deplored and opposed; secondly, that the worst advice one could give to a student is to write as he speaks, for speech takes place in a given living context whereas writing must create its own. "Artificiality is natural to writing. Untutored composition, when it lacks devices of semantic integration, seems inept, cumbersome, and artificial"; and thirdly, the conclusion that the whole subject of good composition is inherently prone to paradox.



William Faulkner— "higher relative readability, but low absolute readability"?

There is a general rule, so to speak, that the traditional stylistic rules-of-thumb are right; and another general rule that general rules are not to be trusted. The appropriately paradoxical answer is that in this field compromise is an inflexible necessity.

The first two of these conclusions derive from the fundamental research forming the philosophical foundation of the book. It is the third, "paradoxical", one that is proximate to the practical superstructure and thus warrants a little more examination.

The key result of the philosophical investigation is the concept of "relative readability". It is universally true (so the argument goes) that a prose text is better written in proportion as it is more easily read—provided that the readability is relative to what it purports to convey.

Some of the prose of William Faulkner is not very readable on an absolute scale, but many passages rank high in relative readability, since they are highly efficient in communicating Faulkner's complex semantic intentions. Implicit in this conception of readability is the *rhetorical* efficiency of prose—its success in affecting the implied reader in ways that transcend the mere conveying of information. Since that dimension of the writer's semantic intentions is an essential part of the meaning in prose, it is also an essential consideration in any judgment of communicative efficiency. Qualified so, this principle is hardly to be faulted as a basic premise for the achievement, and assessment, of good prose. But it is because it is so qualified—and must be—that paradoxes and problems arise in putting it into operation. Good style could well be summed up as *maximum meaning by minimum means*, but factors making for easy reading (confirmed, as they are shown to be, by recent objective research) may conflict with the need to write something complex or subtle:

If the writing problem had a single, central crux we would find it here. Readability demands rapid closure to avoid taxing the reader's short-term memory. But readability also demands explicit constraints on meaning in order to guide the reader's understanding.

There is an insoluble ethical problem here. Some compromise is clearly needed; but how far should a writer compromise his semantic intentions for the sake of readable style? Professor Hirsch's new rule-of-thumb, called "the principle of linearity", is probably as near to a solution as we can come:

> So long as the reader can process what he reads without having to circle back and re-read an earlier part of the text, then the writing is linear. It is writing that has not crossed over the boundary line into unreadability. . . . The principle of linearity is nonetheless very capacious. It admits highly deliberate writing, intricate and even precious writing. It admits long periodic sentences, although it may exclude a series of ill-composed short sentences. . . .

True, and perfectly adequate for student essays. Whether it also admits William Faulkner is not so certain. Perhaps it depends which reader we choose? Or perhaps the rule can be used to show that Faulkner, like Homer, sometimes nods?

A special case of this dilemma crops up in connexion with predictability and familiarity. It can be proved that a familiar vocabulary and a structure with high word-predictability make for speed of processing and therefore ease of reading. Yet this fact logically entails the conclusion that the best style would be a conglomeration of clichés; a conclusion whose falsity hardly needs the experimental evidence cited. Prose that is always predictable will obviously "ways be boring":

> This fact substantiates Herbert Spencer's suggestion of 1852 that variety in style normally lessens reader effort. It appears, therefore, that readability requires both a narrow constraint on attention and also a looseness of constraint. In good prose, this conflict is resolved by making intelligent compromises between the two opposing factors. This is one of several fundamental conflicts in the psychology of readability. . . .

The most frustrating of such conflicts will not be that of the writer who feels he has something to say and is therefore worried about combining readability with adequacy of communication. His problem is partially solved by the axioms of "relative readability" and "linearity". Far more frustrated must be the writer who wants to achieve maximum readability even at the expense of all other considerations; for this man will find rules well-tried in practice, and now well-substantiated in theory, to operate counterproductively:

> If all his clauses were short and all his words familiar; if he used only the active voice and avoided using negatives; if he stuck to just a few thematic tags and bound each to each with *but, moreover, and thus*; if he focused the reader's attention on a single main idea in every paragraph and made his words fall from place in a predictable rhythm, he could still fail to achieve maximum readability. The net effect of his writing would be monotony. His repetitive style would fatigue the attention of his reader. . . . Instead of increasing readability, the end result of following simple readability rules would be to increase rather than decrease processing time. . . . So even if the writer ruthlessly excluded every other aim in favour of readability, he would still have to make willful compromises among conflicting principles.

To compound the problem, there is the evidence of radical disagreement in marking:

> Out of the 300 essays graded, 101 received every grade from 1 to 9; 94 per cent received either seven, eight or nine different grades; and no essay received less than five different grades from 53 readers.

Is all lost, then? Not quite, since all the devices listed above *are* (as Professor Hirsch demonstrates) aids to easier reading; and emphases *can* be adjusted, in the light of the concept of "relative readability", to suit individual cases. Moreover, discovery of the cause of marking-variation points towards a cure. Briefly, discrepancies arise not from different perceptions or imperceptions but from the different weighting that examiners give to certain features of compositions; namely *ideas, presentation*, and *correctness*. Were these to be marked *separately* we should be well on the way to consistency. And were teachers of composition, as such (that is as a mode of writing; not thinking), to concentrate on the two latter features we should be well on the way to improvement; for these can be objectively assessed.

Admittedly this solves the problem of combining readability with semantic adequacy only for those with nothing very profound or subtle to say. However, this is a large class; it includes most of us most of the time. And for all of us all of the time a basic technical competence could do nothing but good. If we cannot be clear with easy material, we cannot but be obscure with the difficult. Anyway, the fact is that progress comes from specialization.

Professor Hirsch is surely right in saying:

> Everything I have learned from my researches . . . [shows] . . . that composition is a craft which cannot properly be subserved under any conventional subject matter. It is not a branch of literary study, or logic, or even of rhetoric [or, he adds, linguistics].

What follows from all this is not fully teased out. It is suggested that as learning to write is a practical matter not a matter of theory, the *philosophy* of composition should be left to teachers. (The panic and paralysis that affects English students faced with theory of literature suggests that he is right.) The corollary must be that good teachers of composition should be highly able specialists in that field (certainly not, as so often in America, literary or linguistic graduate instructors slipping through the purgatory of Freshman Composition on the way to an Elysium with tenure in their own field).

A further suggestion is that each student should be given a great deal of careful commentary drawn up by an instructor fully aware of the philosophical problems and psychological principles investigated. The comments come under nine headings; they are unexceptionable, and no doubt the best practical way between the horns of the dilemmas noted in view of the communal marking. Implied, however, the corollary to this must surely be a vast increase in the numbers of teachers of composition. And perhaps here, as in America, an extra year's higher education, six months of which might be devoted solely to developing skill in writing. Add to this, money for further research, and the bill seems formidable. Nevertheless, one is left feeling it might be worth it. If it was a task attempt, to try to establish "an authentic ideology of literacy", it was also a brave one. This book may be somewhat futuristic; it is also timely.

Allan Rodway

Writing about speech in Glasgow

Language, Social Class and Education
by R. K. S. Macaulay
Edinburgh University Press, £4.50
ISBN 0 85224 320 0

This book is an adaptation from the author's earlier report to the Social Science Research Council on a survey of language, education and employment in Glasgow. The basic data for the survey was collected in 1973 from three sets of interviews.

The first set was with native Glasgow speakers from different backgrounds and ages in order to obtain a sample of Glasgow speech. The second set of interviews was with some Glasgow teachers at primary, secondary and higher education institutions in order to consider current opinions of teachers about language, the language of the taught and notions of standard English. The third set was with employers who were predominantly personnel managers of companies within the Glasgow area. These interviews considered the views and attitudes of employers to the language of applicants for jobs.

The primary data of actual Glasgow speech and the descriptions arising out of this new material are very welcome. As the author points out there is no previous account of the language spoken in Glasgow so that the work provides a valuable addition to our knowledge of contemporary language—or selected aspects of it. In fact, the account of linguistic variation in Glasgow occupies some 31 pages only in the book and is limited to a consideration of five phonological variables and their relationships to social class, age, and sex. There is almost no mention, yet alone discussion, of structure of syntax or lexis so that a reader expecting an authoritative description of Glasgow speech would be disappointed. The emphasis on these five phonological variables does make one wonder whether the term "Language" in the title is the most apt. In this case I think not especially as the author's two models—Labov and Trudgill—are linguistic texts about language, which by the way, they see as being more than pronunciation or accent. These workers found that to be able to write about the social correlates of language without a fairly full linguistic description was likely to lead to a lack of balance. This is precisely where the Macaulay volume is marred—particularly as there is nothing on contemporary Glasgow speech that we can turn to elsewhere.

Chapters on responses and attitudes to Glasgow speech are extremely valuable. They present a wealth of new material about social class and language in a way which brings the informants alive. This is the central core of the book and is to be recommended as an example of one of the best ways of presenting such material. I found these chapters much more helpful and wide-ranging than the earlier discussions about phonological variations. The book finishes with a consideration of the educational implications of some of the contents to be seen in the spoken and written language of Glasgow.

The shorter chapters on social class and standard English are less successful. Macaulay chose occupation as the criterion for social class and found a systematic relationship between the five phonological variables and social class groups selected on the basis of occupation. While I can see that the exigencies of wishing to complete a project do tempt one to choose single criteria, it is surely too simple to equate social class with a four-way classification of occupation. The high level of correlation found between the phonological variations and this aspect of social class make me suspect that partial aspects are being compared with other partial aspects. I worry about the certitude expressed by the author in such revealing statements as "The use of occupation as the sole indicator of social class appears to be justified by the results." (page 65).

Language is much more than phonological variation and social class is much more than occupation. Herein lies the dilemma for socio-linguistics if it is ever to aspire to anything more than relatively incomplete linguistics hand-in-hand with unsophisticated sociology. To be of real value socio-linguistics must take the best from each contributing discipline and reformulate these separate contributions into something truly socio-linguistic.

To be fair such a view may be over-idealistic, but when a reformulation based upon linguistics and sociology does not take place, as I think it does not in this book, then the reader can be left with feelings of dissatisfaction.

Sinclair Rogers

BOOKS

Casting a weather eye

Climate: Present, Past and Future
Volume 2: Climatic History and the Future
by H. H. Lamb
Methuen, £38.00
ISBN 0 416 11540 3

Climate is fashionable these days. Prompted by Henry Kissinger the United Nations plans a world conference on the subject in 1979. Perhaps this will put climatology back into its usual limbo. But more probably not: press and broadcast stories of flood, drought, poles, crop failures and water shortages are now so incessant that public attention is unlikely to go back to sleep.

In spite of its price—up three and a half-fold since volume one arrived in 1972—Professor Lamb's masterpiece is likely to sell, and to be widely pored over. Every generation of climatologists seems to need its encyclopaedist. In my student days it was Wladimir Köppen, who unfortunately (for me at least) wrote in German. Today it is unquestionably Lamb, challenged only by Helmut Landsberg who did not, however, write the 15 volumes of the Elsevier *World Survey of Climatology*, contenting himself with a competent editing job (in English). Lamb hence reigns supreme in the Western world, as does Mikhail Budyko in the Soviet Union. We owe a huge debt to these three men. Without them the job of keeping pace with the flood of literature would be all but impossible.

All sciences have their establishments, and all establishments have their orthodoxies. In the atmospheric domain the accepted wisdom is that of the lurid scientists. Physics and mathematics rule the lower atmosphere, joined by chemistry above about 50km (though the chemists have made heavy inroads into the troposphere in the past few years). These orthodoxies assign high prestige to mathematically derived theory, and to vast numerical modelling exercises. Modern weather forecasting—even the gentle periods of the TV weather casters—depend on such enterprises. And the orthodox have traditionally given low prestige to the kind of work done by Professor Lamb, and others like him.

Because Lamb is an empiricist, rather than a theoretician, he must rely heavily on past evidence. There were no direct instrumental measurements before the nineteenth century, and few of any consequence until the nineteenth. There is no way we can yet model the climates of the past in an authoritative way, and no way we can predict the future beyond a few weeks at most—but, that is, if we confine ourselves to rigorous methods; and above all if we want to be convinced. Various group have applied the big general-circulation models to the presumed climate of the earth at the time of the last glacial maximum (about 18,000 years back). A reasonable fit has been obtained. But this is taken as hopeful evidence that the models are not too bad. If we did not know what the climate was like from geologically derived evidence, we would still be unlikely to believe the models. This may not always be so. But it holds today.

Proxy evidence for past climatic variation must therefore form the core of this huge and indispensable book. Lamb deals first with human awareness of such variations, relying mainly on his reading of classical, Norse, Chinese, French and British writers. He then launches into a treatment of climatic history. He reviews the various sorts of evidence (taking 250 pages to do so, a book in itself), successively he treats meteorological or para-meteorological observations, and dating methods; field evidence from the physical sciences (isotope chemistry, geophysics, sedimentology, sea and lake levels, glaciology and vulcanism); field evidence from biology, especially pollen analysis, tree-ring analysis, plant and animal distributions and marine life; and evidence from human history and archaeology.

This analysis of the sorts of available evidence is followed by chapters devoted to early geological history, to the Quaternary, to post-glacial changes, to the historic period and finally to the instrumental period. A great array of research papers, many of them Lamb's own, is summarized and dissected—but not very successfully synthesized. One gasps for air, and hunts in vain for a lifebelt. Lamb's scholarship is so wide that he forgets that the rest of us need a little help. In any case, the evidence is often conflicting. Perhaps his avoidance of comfortable generalization is the best attitude and very brave. Even in its absence, however, these chapters stand unchallenged as the literature as a summary of what is known about climate's past.

As to the future Professor Lamb is much braver, and much less convincing. He writes about man-made climatic variation with little visible enthusiasm, and with less authority than would have been possible. He touches, also without obvious optimism, on the possibility of climatic forecasting whose potential value is so high that the world is crazy not to spend more on it than it does on horse-racing. He reviews the various forecasts that he knows have been made, and he ends with a gigantic reference list.

The University of East Anglia is to be congratulated on acting as host to Professor Lamb's Climate Research Unit. The centre is internationally financed and commands substantial prestige. England stands well these days in climatic affairs. At Shinfield Park, outside Reading, Axel Wiin-Nielsen from Denmark and various others are creating what may become Europe's major centre of the more orthodox approach to climatic study—numerical analysis of the general circulation. At Bracknell, the head office of the Meteorological Office, John Sawyer, Fred Bushby, Andrew Gilchrist and others have similarly established that the good British tradition in the atmospheric sciences will include a full understanding of atmospheric dynamics and its numerical analysis. To those of us who work outside Britain, this looks like strength in depth.

When I was a student we were told that climate was average weather, and that it was essentially invariant. Now we know better, thanks to Lamb and his few peers. There comes an end to the atmosphere's capacity to vary, and to take us by surprise. Climate is better regarded as our expectation of weather—as that against whose caprices we must defend ourselves, and whose resources we can tap if we are wise enough. Whitehead said something to the effect that how the past perishes is how the future becomes. We have a long way to go before we can say this of the atmosphere. But Lamb's book prods us in that direction.

F. Kenneth Hare

Living together—environmentally

Fungi, Man and his Environment
by R. C. Cooke
Longmm, £6.75
ISBN 0 582 46034 4

The Biology of Symbiotic Fungi
by R. C. Cooke
Wiley, £10.75
ISBN 0 471 99467 7

When two books by the same author, on the same general theme, are reviewed together, it is likely that one of them will be favoured at the expense of the other. This is the case here. *Fungi, Man and his Environment* soaks to fill an important gap—fungal activities that affect man—but the first five chapters contain fairly predictable material available elsewhere. Only when the author discusses fungi as allies against insect pests and later, ant gardens, are we presented with concepts that are out of the general run of mycology. This originality is occasionally maintained in chapters on toxins and industrial protein and modified foods. The last chapter on magic mushrooms and hallucinogens provides an idiosyncratic ending, containing a good account of bioluminescence and evidence of a wider scholarship than is usual in biological writing. The book is printed in a discouragingly small typeface but errors are few, notably the location of Sydney in Queensland (fig 6-8) and the obsolete use of DPNH.

This book might provide background reading for first-year university students, but a number of the topics dealt with are available at much greater depth in *The Biology of Symbiotic Fungi*. This title takes the broadest view of symbiosis—de Bary's "living together". By adopting this definition, the author has set himself the unenviable task of covering the associations of fungi with animals, plants, and other fungi at a level suitable for both undergraduate and postgraduate readership.

PASTORAL
Coming April
Nature and Society:
Later 18th Century Uses of the Pastoral and Georgic,
Richard Feingold
£13.50
Lit. Crit. and social history.
HARVESTER PRESS

In chapter one, De Cooke divides symbiotic fungi into six biological groups using the criteria of antagonism, neutralism and mutualism, combined with facultative or obligate dependency. But as he has already informed us in the preface, the rest of the book falls into two distinct parts dealing with fungus-animal and fungus-plant associations. It was not possible to treat animal and plant symbiology in a comparative way due to the great disparity of knowledge in the two systems.

The section on fungus-animal associations is subdivided into antagonistic, neutral and mutualistic symbioses and much of the material is of a wide biological interest. In the antagonistic section, for example, the range of topics extends from fungi that capture protozoa to the fungal diseases of man. These sections bring together much new information and the references to the literature on fungus-animal associations are very comprehensive.

The plant sections are under the headings antagonistic, mutualistic and interfungal symbioses. The obligate parasites of plants are covered in a chapter on biotrophs, a substantial piece of writing with a very extensive bibliography. Facultative parasites are dismissed in five pages on "facultative necrotrophs". Are such fungi really symbiotic? Some of the most important causal agents of plant disease are discussed in an equivocally titled chapter, "Obligate necrotrophs and hemibiotrophs", these being organisms that are neither truly facultative nor truly obligate parasites.

The section on mutualistic symbioses with plants has chapters on the major aspects of ectomycorrhizas, endomycorrhizas and lichens, the manifest symbioses involving fungi. A serious omission is a detailed treatment of the orchid-fungus relationship, possibly due to uncertainty as to whether this is mutualistic or antagonistic. The vesicular-arbuscular types may be the characteristic mycorrhizas of the southern hemisphere but in Australia *Eucalyptus* has a true ectomycorrhiza. The final chapter on antagonism between fungi brings together knowledge from different sources on an underrated subject.

Hugo Fletcher

"Read on, Macduff . . ."

We bet you that the Bard would have approved of our Dissertations service. When you're asking Macbeth and reading the Dark Lady you need to have as much valuable research time as possible.

You can ask Macduff and gain "golden opinions from all sorts of people" simply by requesting our free catalogue of Doctoral Dissertations on Shakespeare. It might not tell you the identity of the Third Murderer but it does contain full details of almost 500 original research studies.

It is just one of a series of free subject catalogues specially designed to introduce you to the full range and variety of available dissertations on your subject. Take a look at our complete list and tick your selection.

☐ ACCOUNTING	☐ INTERNATIONAL TRADE
☐ AFRICA	☐ JAPAN AND KOREA
☐ AGRICULTURE & AGRONOMY	☐ LATIN AMERICA
☐ ARCHITECTURE AND PLANNING	☐ LEADING 20th CENTURY POLITICAL FIGURES
☐ ASIAN LITERATURE	☐ LIBRARY SCIENCE
☐ AUSTRALASIA	☐ MARKETING
☐ CIVIL ENGINEERING	☐ MIDDLE EAST
☐ COMPUTER SCIENCE	☐ MINING
☐ CRIMINOLOGY	☐ MUSIC
☐ CROP & SOIL SCIENCE	☐ OCEANOGRAPHY
☐ ECOLOGY AND THE ENVIRONMENT	☐ PEOPLE'S REPUBLIC OF CHINA
☐ EUROPEAN LITERATURE	☐ POPULATION STUDIES
☐ FINE ARTS	☐ RELIGION
☐ GEOLOGY & MINERALOGY	☐ RUSSIA
☐ GREECE	☐ SHAKESPEARE
☐ HYDROLOGY & DESALINATION	☐ SOUTH EAST ASIA
☐ INDIA & PAKISTAN	☐ TROPICAL DISEASES
	☐ UNITED NATIONS
	☐ VETERINARY SCIENCE

If your research interest is not covered by one of the above catalogues please enquire about our DATRIX II SEARCH SERVICE—it locates all available dissertations on every subject.

Please send me my selected catalogues together with full details of your complete Dissertations Service.

NAME .....
POSITION .....
ADDRESS .....
.....

Please return to Kim Desbayes, Promotions Manager, at the following address:—

University Microfilms International
18 Bedford Row, London WC1R 4EJ, England.
Telephone 01-242 9405 Telex 8811863 EXEL G
HI

Information Book Awards

The Times Educational Supplement will shortly announce details of this year's Information Book Awards

These annual prizes—
one for a book for children up to the age of 10,
the other for a book for those aged between 10 and 16—
are open to books which have originated either in Britain or the Commonwealth

Last year's winners were
Richard Mabey's
Street Flowers (Kestrel Books)
and
Man and Machines,
from the
Mitchell Beazley Joy of Knowledge Library

BOOKS

Dissenting inheritance

A Gathered Church: the Literature of the English Dissenting Interest, 1700-1930
by Donald Davie
Routledge and Kegan Paul, £4.25
ISBN 0 7100 8640 7

A generation ago Donald Davie arrived at Cambridge to read English. Any dissenter who reads English faces a problem. After Bunyan, dissent is often defined as life-denying or as the religious analogue of a Margate boarding house: clean but limited. From Ben Jonson to Matthew Arnold dissenters comprise a creed "everywhere spoken against". On the other hand, if you are up to read history the armosphere is much more sympathetic. From Haldyy to Christopher Hill there are good things to be said about Methodism or Puritanism and sometimes about both.

Donald Davie is specially concerned with the Hanoverian phase of dissenting culture, partly because it is patronizingly passed over by literary historians and easily dismissed even by political historians as a quietist decline from the great days of rebellion and revolt. These dismissive attitudes prevent any interest in the Calvinist aesthetic of that period. To many people the very notion of a Calvinist aesthetic is contradictory. Yet if you look at a picture of a Dutch church interior, sing "Old Hundredth" or "York", go to a French Protestant service, or catch sight of a retiring classical conventicle in Somerset, you experience a special kind of intensity. You are travelling the negative way: fullness by limitation, richness in constraint, grandeur through gravity. Davie identifies this intensity, and also exemplifies it. He writes austerely about austerity, soberly about sobriety—and reprovingly about reprobation.

Calvinism is linked to classicism as surely as Methodism is linked to romanticism. So you might expect Davie to compare Isaac Watts with Charles Wesley. But that has been done in so exemplary a fashion by Bernard Manning that any follow-up is quite difficult. Davie concentrates instead on Watts and then makes a comparison between Wesley and Blake. It is, of course, shocking that literary historians should pass Watts by as a "mere" hymn writer. "O God our help in ages past" is a lyric poem of singular purity of diction. Like Blake's "Jerusalem" it is a simple and mighty tribal chant, universally known and therefore almost beyond —and beneath—notice. Our ignorance of Isaac Watts is deepened by our knowledge of Matthew Arnold. Arnold has so impressed on us the opposition of Hellenic and Hebraic that we discount those instances where the two are united. So we fail to recognize in Watts as "authentic a voice of Augustan England as Alexander Pope".

John Wesley is also a voice from our Augustan past, but not fully recognized as such because so much of his beautifully proportioned and reasoned prose is bound away in sermons. I am sorry Davie had to restrain himself from dealing with John Wesley. The real romantic in Methodism is brother Charles. Even though Charles Wesley was rooted in the classics, ancient and Christian, and steeped in classical poetry, his own works have a romantic pace, colour and dynamic.

The comparison which Davie makes between him and Blake is surprising. Wesley deals in the paradox of divine immanity: when I fall I rise, when I am weak then I am strong. Oxymoron is the central figure of Christian speech. Blake is an altogether different kind of dissenter, aligned with the antinomian heresy and deploying dialectic rather than paradox. Love takes over from law in a temporal sequence, and likewise experience takes over from innocence. Davie's conclusion is also surprising. He asks at what point in the process of popularizing Christianity certain "difficult and momentous truths" are so maimed and operated on that they cease to be themselves. Davie sees Blake as a martyr of this popularising process, not as its hero. This will not get Donald Davie many friends among the children of Mammon.

Davie goes on to deal with Mark Rutherford and with little noticed undercurrents of sectarian dissent surfacing for example in Faraday (a Sandemanian), in Gosse and in Orde Wingate, who were both brought up among the Brethren. He uses the tension between D. H. Lawrence and the Bloomsbury circle as an instance where a genius born in an atmosphere of what Eliot called "Hymn-singing pietism" broke out and confronted a different and quite startling mutation of the evangelical spirit. But here we are no longer dealing with varied products of corporate dissent and of corporate evangelical Anglicanism but with individuals trailing a particular religious genealogy.

Religious genealogies of this kind border on sociology and Davie pulls up at that border. But he does note the very curious book by A. L. Rowse about All Souls and appeasement which sees the spirit of appeasement descending directly from dissenting pacifism. There is more to be written along these lines but not, unhappily, by a literary critic.

Many of Davie's concluding pages are given up to the aesthetic impoverishment of dissent, especially the tepid memorialism of the doctrine of the Eucharist and the exaltation of vapid sentimentality in the sermon. He blames the Methodists for giving an opening to sentimentality but the slow stain spread nearly everywhere. This helps explain why, when Davie came up to Cambridge to read English, he had a problem. It is not easy to be a dissenter and to care passionately about poetry. Yet this book shows how creative the problem of a dissenting inheritance can be.

David Martin



Two of the icons illustrated in A History of The Crusades Vol IV: The Art and Architecture of the Crusader States edited by Harry W. Hazard, University of Wisconsin Press, £17.50.



Restoration revisionism

The Re-establishment of the Church of England 1660-1663
by I. M. Green
Oxford University Press, £8.50
ISBN 0 19 821867 2

The Restoration of 1660 is typical emerging from comparative ob... cal neglect. As well as Joan Thirsk's recent general survey of the reign and her detailed research into the land settlement, Dr Wilcox has explored the politics of the period in his book *Charles II and the Cavalier House of Commons*. Ecclesiastical affairs, too, have received considerable attention from G. R. Abernathy, R. S. Bosher, Anne Whiteman. Dr Green's researched and effectively argued monograph takes its place, therefore, among a growing collection of studies of this period.

His book is a valuable exercise in historical revisionism and the issue not only with one of the more recent historians of the Restoration settlement but also with Baxter, Clarendon, the two principal contemporary commentators on the events of 1660-61. Green argues persuasively that a disturbing lack of sight characterizes the accounts of both these early writers on the Restoration settlement. For Baxter, the bitterness brought about by years of persecution after 1662 convinced him that despite the initial sincere screen of conciliatory gestures towards Presbyterians the basic measures of 1662 had been long meditated. Similarly, Clarendon's retrospective account of the events of 1660-61 was warped by his experience of political disgrace and banishment. In attempting to vindicate himself and to conceal the truth of Charles II's inclinations towards Catholicism, he deliberately played down the moderate practices of the Restoration regime settlement and dwelt largely on the harsher, more uncompromising episodes which followed.

Views like these greatly influenced R. S. Bosher's book, *The Making of the Restoration Settlement* (1951), in which Laudian influence and strategy were presented as the principal factors affecting the re-establishment of the church. Green is unconvinced, and finds "Laudianism" an anachronistic term and "Laudians" difficult to discern in 1660.

Far from seeing the church settlement as a systematic plot (Laudian or otherwise) to put the clock back, Green emphasizes the tact and genuine moderation which marked the early proceedings after 1660. Much patronage had lapsed to the crown during the Interregnum, and after 1660 Charles II seems to have exercised it in a fair-minded, liberal and shrewd way in his attempts to establish a broad-based church. There were "laws enough against the Papists", the King declared, and the moderate Presbyterians Baxter, Reynolds and Calamy were among the first to be offered bishoprics.

The change from the initial moderation of 1660 to the harsher and intolerant measures of 1662 was due not to the influence of a "party" nor to royal policy but to the Cavaliers. Macaulay long ago expressed a basic truth when he described the royalist gentry as being "well disposed towards episcopacy and the bishops". Parliament, of course, provided only one setting for this zealous anglicanism, and Green does well to concentrate on gentry activity in the counties—on their work in the militia, on the enforcement of the Corporation Act, on their persecution of puritan clergy, and on their relations with the restored bishops.

And yet, as Green demonstrates, the re-establishment of the Church of England was less decisive than its gentry proponents wished. The new bishops were by no means invariably hard-liners, the church courts never recovered their pre-Civil War position, and "far more Commonwealth clergy conformed outwardly than were ejected for nonconformity" in 1662. One of the strong points of this useful and scholarly book is that it suggests that in religion, as in other spheres, there was much continuity after the Restoration.

R. C. Richardson

BOOKS

The paradox of psychoanalysis

Self and Social Context
by Ray Holland
Macmillan, £10.00 and £4.95
ISBN 0 333 19811 5 and 19812 3

To march unwaveringly into the ideological confusion and battle din that marks the contemporary social science arena is either the act of a courageous intellectual or a prepared to die for his personal version of the truth or the crazed aberration of one whose ears have become the competing shrieks of expert opinions far far too long. Of Ray Holland's sanity, I cannot speak although from his own accounts of his attempts (successful) to fuse sociology and psychology at Chelsea College, London, I would not be surprised to learn that there were moments when he was prepared to throw the whole enterprise in and take up a course in Zen. His courage, however, is undeniably for he has set himself an immense task, a critical reading no less of virtually the entire list of contemporary theorists of the self and its relationship to its social environment.

In large measure, the enterprise is successful. It is customary to comment on the language of sociologists, on their use of jargon, their conversion of simple, pristine concepts into complex, opaque linguistic deformities, ugly to the eye and impenetrable to the understanding. For the most part, Holland handles difficult material exceedingly well. He treats his readers to a lucid account of Althusser's rescue of the original Marx and Lacan's similar operation on behalf of the much-misunderstood Freud. He provides a tough, cogent and dismissive review of those theorists, such as George Mead, Harry Stack Sullivan and Erik Erikson, whose attempts to move the Freudian spotlight from the individual to the social context resulted in a retreat into "positive generality".

He is no more merciful to Maslow and Rogers, the former for his ideological innocence and an overwhelming urge to place all human experience in a wholly integrated schema and damn the contradictions, the latter for his disregard of the role of power relationships in the social structure and his retreat into an extreme individualistic conception of the self and its action. Yet throughout these assessments and others, which include Kelly, Allport, Coser, Leyhsen, Goffman and Parsons, he manages to wring from the pulp a sizeable portion of rich invigorating juice. He is never negative for effect and more often than not his judgments invite cautious agreement.

However, his own purpose is integrative too and in a sense he fails more to the dangers of integration already identified in Maslow, a tendency to marry incompatibilities and a penchant for ignoring alternative explanations. He is most hesitant when dealing with the problem of science. There are 23 references to science in the index but nowhere is the reader provided with Holland's personal understanding of the concept. A somewhat spartan and largely hostile use of Popper and a misleading reference to Kuhn disposes of the theoretical framework of scientific endeavour and allows Holland to proceed on the basis of a largely relativistic and subjective theory of knowledge.

This may account for the one aberration in the book, namely his account of the theories of Laing, Esterson and Cooper. Of Laing, he admits that his schema offers nothing by way of social and political analysis but seems to believe that it does provide a discourse for therapy. Elsewhere he notes Laing's hope in 1961 for a revolution in psychiatry, a revolution which never came and for the same sad reason —Laing's theoretical speculations concerning schizophrenia failed to fulfil their immense promise. Yet Holland leaves one with the feeling that it was *psychiatry* and not Laing that failed and a similar feeling is experienced when he writes of the historical split of psychology around 1880 into physiological and philosophical psychology.

The impression is given, no doubt unwittingly, that the trend towards the new psychology was essentially a social trend in which issues of intellectual content played a peripheral role. In this view he concurs with the views of Ben-David and Collins, yet such views neglect the very real pressures on psychology so to develop, pressures emanating from the expansionism of the basic sciences in medicine itself and based on very striking advances in understanding and treatment. To reduce the development of physiological psychology to a matter of professional prestige, role conflict and group interests is to commit the sort of sins which get sociologists such a bad name within the biological sciences.

But these are small criticisms to put beside Holland's failure to face the central paradox of psychoanalysis. Of all the great names that pass under his microscope, not even Marx escapes with the same degree of bodily integrity as Freud. It is true that psychoanalysts, British ones anyway, are ticked off for concentrating on a relatively prosperous middle class, but Holland fails to take this observation further. It is tossed off as some form of inflicting pecadillo, a tiresome shortcoming, not in any way bound up with a serious flaw in Freudian theory itself. He asserts the need for psychoanalysis to develop a sense of the social context of its own theory and practice and seems convinced that such a need can be fulfilled. His arguments are persuasive yet in the last analysis the feeling that the attempt when it comes, and come it must, may well bring the whole edifice tumbling down first will not be assuaged.

Holland's book demands and deserves re-reading for he has constructed an immense, wide-ranging scholarship into a compact and thoroughly readable book. It is the sort of book which has one wagging one's head, at one moment in forceful agreement, at another in animated dissent. I cannot give it greater praise.

Anthony Clare

Balancing the heart and mind

The Social World of the Child
by William Damon
Jossey-Bass, £10.00
ISBN 0 87589 339 2

Most of the recent research on child development has dealt with intellectual rather than with social development. To some extent this is due to pressures from society, as found in the ever-increasing competitiveness between nations and individuals for intellectual achievement, as well as in the unease about inequality of opportunity for minority groups. To a large extent, however, this is also due to the efforts of one man: Piaget, whose work on cognitive development has so completely transformed psychology and who has stimulated such a great spate of studies in this field. Our view of the child is now decidedly lopsided: a creature with an enormous brain and but a pea-sized heart.

It is only recently that Piaget's virtual neglect of social aspects of development has been countered by a number of studies that see the child as a member of society. Damon's book is one such example —only beware of the claim made in the dustcover that he offers a comprehensive account of children's social interactions.

Aggression, attachment, dependence and independence—these topics are not to be found here, for this book leaves the direct analysis of interpersonal relationships severely alone (but then whoever reads a dustcover except a reviewer? And, for that matter, however writes such material?). Instead, we have more Piaget, for Damon is primarily concerned with social cognition, that is with the way in which the child apprehends, analyses, and understands his peers. Not that this is an unintelligent or insignificant topic, far from it. Only let the reader be under no misapprehension as to the book's coverage.

To take just one example: one of the topics treated here is the development of friendship. There has been a considerable revival of interest in this area of late, with some fascinating and sophisticated analyses being carried out on the way in which groups of young children gradually become capable of integrating their behaviour into interpersonal sequences, giving rise to ever more complex peer relationships. However, this is not what Damon is concerned with, for his interest lies in children's *knowledge* of the concept of friendship. The child, that is, is treated more as an interested bystander than as an actual participant in social transactions: a detached observer of his own behaviour who calmly delivers judgment rather than somebody who plunges into the heat of interpersonal battle.

At that level there is a great deal of interest in this book—not only about friendship but also about such topics as the child's knowledge of justice, authority, social conventions, and sex-role stereotypes. Most of it is based on Damon's own work, the occasional shortcomings of which he describes with engaging frankness. As a contribution to the field of social cognition, this book is certainly most useful.

The trouble is that Damon repeatedly describes it as something more, namely as an effort to integrate social knowledge and social conduct. It is here that, conceptually, the book is at its weakest, which may be a pity but is hardly surprising. How to bridge the gap between knowledge and action is a perennial problem for psychologists and has profound methodological implications. The usual technique (employed by Piaget and also in this book) is to interview children, and from their verbally articulated answers build up a model of the underlying cognitive structure. But what is the relationship between an individual's (and especially a child's) explanations of an event and his conduct with regard to that event? Damon is very much aware of this problem, but is side-tracked into making another distinction, namely between hypothetical and real-life knowledge.

The former refers to the pictures and stories that are frequently used to elicit material from children; the latter Damon obtains from situations that he set up for his subjects to highlight such aspects as sharing or obedience. Unfortunately these situations are not only highly artificial but are also mainly used to obtain yet more interview material rather than the sort of direct observational material that human ethologists are now increasingly providing. The gap between knowledge and action remains.

One further gap also remains: that between social development and social experience. Damon acknowledges this, but like Piaget uses a wholly individual-centred approach that abstracts the child from his social context and studies him without reference to the influences that shape knowledge and conduct. That development is not simply a function of experience moulding the child and arbitrarily pushing him in certain directions is now widely acknowledged; yet the precise part it plays in growth remains one of the major unsolved questions in developmental psychology. At its simplest this issue may be studied by means of individuals selected from a variety of systematically contrasted social settings; yet even this is rarely done and consequently, as in this book, gives rise to a view of development that is unduly restricted.

H. R. Schaffer

DAWSON PUBLISHING

Nineteenth-Century Britain
David Nicholls
This is the first of a new series of critical bibliographies on periods of modern history taught in schools, colleges and universities.
23cm, 160p, cloth
0 7129 0825 0, £5.00

Life in Kent at the Turn of the Century
Michael Winstanley
The author has built up a lively human account of Kentish life of two generations ago, based on personal recollections (gathered through tape-recordings and written sources). The book is fully illustrated by contemporary photographs, many unpublished.
23cm, 192p, illus, cloth
0 7129 0828 5, £6.00

Group Projects in Local History
Alan Rogers (editor)
This practical manual brings together the expertise of twelve practising local historians who describe in detail a wide range of English documents, their use and interpretation.
23cm, 224p, illus, cloth
0 7129 0765 3, £7.00

CANON HOUSE, FOLKESTONE, KENT

Tears of blood at a long Gethsemane

A History of Israel from the Rise of Zionism to our own Time
by H. M. Sachar
Blackwell, £14.00
ISBN 0 631 17870 0

The Jew and his History
by Lionel Kochan
Macmillan, £7.95
ISBN 0 333 19227 3

Sachar's book is one in which people are frequently reduced to tears—and in view of its subject-matter (the history leading up to the foundation of the State of Israel, and the history of that state down to the year 1975) it is not surprising:

Herzl and Wolffsohn embracing each other with tears in their eyes as they catch their first glimpse of Palestine, murmuring softly to each other, "our country, our Motherland Zion!"; frustrated delegates to the Sixth Zionist Congress in 1903, sitting on the floor of the congress hall and weeping after the vote to investigate the possibility of a Jewish settlement being established in East Africa; the tumult, and what Stefan Zweig recalled as "a wild explosion of despair" at the cemetery at the funeral of Herzl in Vienna; Balfour visiting Palestine in 1925 and being moved to tears by the progress he saw in the country as he viewed it; tears at the Twenty-First Zionist Congress late in the evening of August 24, 1939 when Weizmann took his leave and bade farewell to the European delegates, extremely few of whom were to survive the war; President Truman reduced to tears after meeting Ben-Gurion in a New York hotel in 1948; and so it continues.

It has been a long Gethsemane, and the tears have been tears of blood. The arguments of all concerned in the founding of the state of Israel—Jews and Muslims, Israelis, Palestinians and Arabs—all have their deep justification and emotion. It is one of the great merits of Sachar's account that he makes it clear how profoundly correct and logical are the arguments of all those engaged and how, nevertheless, the argument of one side cannot convince the mind of another, because each side starts from an entirely different premise. It is equally a merit of this account that Sachar does not cast nations or individuals as heroes or villains —he even has some sympathy for the British attempt to solve an insoluble problem.

Sachar's account is written in the American style of turning history into an epic story—not unlike such works as Schlesinger's *A Thousand Days, or An American Melodrama* by Chester et al. Based on extensive reading and research, this means that Sachar has written an epic tragedy—and the book ends, indeed, with foreboding of greater tragedy to come. Sachar makes it clear how much more the Arabs could have gained—or how much less they might have lost—if they had been able to coordinate and work together in the period before and immediately after the Second World War. The lesson has apparently not yet been learnt, since it is clear that much might have been gained (from the Arab point of view) from Sadat's recent and ingenious initiative, if the Arabs had indicated a united willingness to seek a peaceful solution: nothing could have put greater pressure on Israel in its relations, particularly with America, than a cooperative approach of an apparently peace-seeking kind. Israel breathes again, for with enemies like that, who needs friends?

Sachar makes it clear that the final dimensions of tragedy already worked out in so many lives—not least those of Palestinians —may yet come to a climax far exceeding the apocalyptic visions of old, since the fundamental mistrust remains and blocks off all possibilities of a settlement. Sachar's sombre and detailed account is a magnificent achievement. It goes without saying that there will be interpretations in it which those on each side will find unacceptable. But as a general account it is a readable and rewarding study.

Dr Kochan's book is an account of the Jewish sense of their own history. The curious puzzle, which Kochan takes as his point of departure, is the question why the Jews, with their profound sense that God had acted in history to single them out as his people with a particular responsibility in the world, did not continue to write history or value history highly, after the fall of Jerusalem—or as Kochan puts it: "Why did the historical dog not bark more loudly?"

Kochan offers a succinct account of Jewish historiography, and draws out very effectively its idiosyncratic nature, even when the historians were well aware of what was happening among Gentile historians. A weakness of the book is that, although it frequently draws attention to the possible connections between Jewish and non-Jewish historians, it does not pursue these in detail, and it fails to make clear what was historiographically possible and what was valued (and why) in the particular Jewish cultures or contexts with which he deals. At one point (page 60) he draws attention to the fact that "the sociological study of Jewish Messianism has been neglected by comparison with the abundant study of Utopian and millennial thought in the Gentile world", and it is clear that the sociology of knowledge has been equally neglected in the attempt to define what was possible and rewarded in the Jewish intellectual milieu at particular periods.

Kochan's book is a very useful study of what is, indeed, a curious puzzle, and it fills very helpfully a gap for the reader who is aware of such names as Graetz and Rosenzweig, but is unable to place them in the long continuity of Jewish cultural development.

John Bowker

EUROPEAN MONOGRAPHS IN SOCIAL PSYCHOLOGY
Series editor: H. Tajfel
Nos 1-13

Social Contexts of Messages
edited by E. A. Carswell and Ragnar Rommetveit
1971, x + 164pp., £5.00/$10.00 0 12 161250 3
Psychologists from many European countries, have carried out research in a largely unexplored area which may be described as an intersection of the psychollinguistic and social psychological disciplines.

The Context of Social Psychology: A Critical Assessment
edited by J. Israel and H. Tajfel
1972, viii + 438pp., £9.80/$19.50 0 12 375150 0
This book is concerned with an assessment of the contribution made by social psychology to the study of interaction between man and society.

Categorization and Social Judgement
J. Richard Eiser and Wolfgang Stroebe
1972, viii + 236pp., £6.00/$11.00 0 12 235350 1
The joint aims of this book are to present a systematic introduction to the area of social judgement and to develop a new theoretical approach integrating the social judgement and social perception research traditions.

Social Communication and Movement
edited by M. von Cranach and I. Vine
1974, viii + 490pp., £13.40/$24.00 0 12 724750 5
It is the belief of the editors that the chapters in this volume will help to provide the broad foundation upon which a comprehensive theory of face-to-face interaction can be built.

Health and Illness
Claudine Herzlich
translated by Douglas Graham
1974, xvi + 160pp., £5.50/$12.50 0 12 344150 1
This remarkable book is described by Serge Moscovici as a serious contribution of lasting value to the psychosociology of our culture.

The Illusion of Attitude Change
J. M. Nuttin, Jr.
1975, xii + 236pp., £7.50/$17.00 0 12 522940 2
This monograph focuses on a progressive and systematic theoretical analysis of some dramatic shifts in the attitudes of university students towards a very political issue.

Speech Style and Social Evaluation
H. Giles and P. F. Powesland
1975, xiv + 218pp., £7.70/$17.00 0 12 283750 9
This book presents a thorough investigation into the social importance of individual speech style. The authors examine the results of extensive research and show how listeners make judgements about a person's social status, competence and personality on the basis of his manner of speech.

Social Exchange Theory
J. K. Chadwick-Jones
1976, viii + 448pp., £12.00/$28.25 0 12 166350 7
This book is intended for those who wish to discover the nature of social exchange theory, to explore its controversial questions and most recent developments.

Social Psychology and Intergroup Relations
M. Billig
1976, x + 428pp., £12.50/$29.25 0 12 097950 0
As well as offering a thorough investigation into the social psychology of intergroup relations this book contains a wide-ranging critique of certain trends in contemporary social psychology.

Social Influence and Social Change
Serge Moscovici
1977, xii + 240pp., £7.00/$15.25 0 12 508450 1
Serge Moscovici outlines a new concept of social influence and social change, providing social psychologists, sociologists and political theorists with a fresh starting point for the understanding of social behaviour.

Linguistic Style and Persuasion
Rolf Sandell
1977, xiv + 330pp., £10.50/$23.00 0 12 618750 0
Instead of using a general psychology of language, the author introduces "psycholystistics", the differential psychology of language in order to find a new pathway to the understanding of language as a manipulatory tool.

Decoding Oral Language
Astrid Heen Wold
March/April, 1978, xii + 218pp., £8.40/$18.50 0 12 336250 4
This book is the result of a long programme of theoretical inquiries and experiments on aspects of time in language and communication.

Language Ethnicity and Intergroup Relations
edited by H. Giles
January, 1978, xiv + 363pp., £14.50/$28.35 0 12 283740 1
The papers in this book illustrate the importance, complexity and varied functions of language for understanding interethnic group relations.

Academic Press
London New York
San Francisco
A Subsidiary of Harcourt Brace Jovanovich, Publishers
24-28 Oval Road, London NW1, England
111 Fifth Avenue, New York, NY 10003, USA

THE SOCIAL CONTEXT OF LANGUAGE

edited by Ivana Markova,
Department of Psychology, University of Stirling
This volume of contributed chapters by leading researchers in psychology and linguistics brings together psychosocial and linguistic aspects of language with a particular focus on the social functions and origins of language.
0471 99510 8 approx. 340 pages—In Press approx. £9.00/$18.00

COGNITIVE DEVELOPMENT

edited by J. A. Keats, Department of Psychology, University of Newcastle, New South Wales; K. J. Collis, Department of Education, University of Tasmania and G. S. Halford, Department of Psychology, University of Queensland.
This volume of contributed chapters reviews and reports the results of an extensive programme of research into cognitive development. Its aim is to create paradigms which are objective but capture the essence of the psychologic approach of Piaget. The authors present new theoretical and empirical findings resulting in a variation of some of Piaget's formulations.
0471 99505 3 approx. 514 pages—In Press approx. £14.00/$28.00

THE DEVELOPMENT OF COMMUNICATION

edited by Natalie Waterson, School of Oriental and African Studies, London, and Catherine Snow, Institute for General Linguistics, University of Amsterdam.
This collection of contributed chapters deals with various aspects of child language, offering an overall survey of new developments and issues in this field.
0471 99628 9 approx. 528 pages In Press approx. £14.00/$28.00
Text catalogues in the following subjects are available from Wiley at the address below.
Economics & Management; Mathematics; Statistics, Computing; Physics; Chemistry; Life Sciences; Geography & Geology; Psychology & Sociology.

John Wiley & Sons Ltd.,
Baffins Lane, Chichester, Sussex PO19 1UD, England

LANGUAGE AND MATURATION

Paula Menyuk

Language and Maturation summarizes some of the current findings on developmental language behaviour in a concise, well-organized and non-partisan manner.
It begins by describing the explanatory theories of language behaviour in the adult and of language acquisition in the child that are current in the literature. The developmental course is then divided into the periods of infancy, early language development, and language development in middle and late childhood. Finally, the question of "adult-like" and "child-like" language behaviour is discussed. Introducing each chapter are those questions most germane to an examination of that period of development, and some of the partial answers conclude sections of the discussion.
The book is addressed not only to linguistics students, but also to those preparing themselves to be psychologists, educators and therapists.
0 262 13132 3 £8.75

Coming soon: SPEECH AND LANGUAGE IN THE LABORATORY, SCHOOL AND CLINIC, edited by James F Kavanagh and Winifred Strange. 0 262 11065 2

The Massachusetts Institute of Technology

THE MIT PRESS

126 Buckingham Palace Road, London SW1W 9SD

PSYCHOLOGY AND EDUCATION
An Introduction

Jerome Kagan and Cynthia Lang
Spring 1978, £9.05/$13.95
576pp; paperbound
0 15 572 770 2

A basic introductory textbook that requires no previous training in psychology. It covers goals and values in education; the psychological nature of the child; learning, cognitive and affective development, and motivation; and current controversial issues such as intelligence and intelligence tests, slow and disabled learners, and social class. Jerome Kagan is a distinguished and internationally known psychologist, and this new text reflects much of his own research as well as the work of other scientists.

Harcourt Brace Jovanovich Ltd.
24-28 Oval Road, London NW1, England

This week in the
T.L.S.
Poe, Hašek, Henry Salt, John Wain,
Diana Trilling, Henry James, Erik Eriksson
Every Friday 25p From your newsagent

BOOKS

Pursuing the evolution of knowledge

Jean Piaget: Psychologist of the Real
by Brian Rotman
Harvester Press, £7.95
ISBN 0 85527 670 4



Jean Piaget on his eightieth birthday, from The Essential Piaget: an Interpretative Reference and Guide edited by Howard E. Gruber and Jacques Vonèche, Routledge and Kegan Paul, £14.95.

Orson Welles once remarked (in the character of Harry Lime) that after a thousand years of peace Switzerland had succeeded only in producing the cuckoo clock. Perhaps he would now append the gnomes of Zurich and the most famous living Swiss, Jean Piaget.

There is a tendency to think of Piaget as a child psychologist and educationist. In fact, he is neither. After training as a zoologist (his thesis was on molluscs), he became absorbed by the problems of how human beings come to know reality, how they develop the power of rational thought, how they create such abstract disciplines as mathematics. He soon formed the opinion that the answers to these epistemological questions would be forthcoming only from a biological standpoint. Since it was impossible to study the historical genesis of notions such as cause, substance and quantity, their genesis in the minds of children would have to be investigated. It would then be possible to study more general epistemological issues. Piaget originally intended to devote five years to children; in fact he spent some 40 years studying them. But, a decade or so ago, they evidently ceased to be his major preoccupation, and he began to publish a series of works on mathematics, biology, structuralism and philosophy. Brian Rotman's book provides an account of this recent work and a critique of it.

The central assumption of Piaget's genetic epistemology is that the evolution of knowledge is governed by the same principles that govern the evolution of species. Minds are organisms that grow and adapt like any other; they assimilate reality or else transform themselves to accommodate it, much as an amoeba copes with its environment. Indeed, the evolutionary process that starts with the simple behaviour of protozoa leads to the actions by which human infants come to know the world, and in turn to the internalization of these actions, which is the basis of all thought from simple reasoning through to the higher reaches of mathematics. Ontogeny recapitulates phylogeny with a vengeance. Piaget was even taken by the similarity of children's ideas to those of the pre-Socratic philosophers.

He now favours parallels in the mechanisms of thought rather than in its specific content. Yet, even here there is something very odd about his theory. As Rotman puts it, "what is the necessary connexion between the historical evolution of knowledge and psychological development? Can it really be true that discussion, criticism, historical context, and social circumstances are all irrelevant to the development of psychological processes?" Apparently so, according to Piaget. He regards both the growth of knowledge and the development of intelligence to be ramifications of the laws of evolution. That there is a sort of natural selection of ideas is indubitable, but that affects the direct operation of biological principles seems farfetched. Rotman points out that Piaget's account of the inevitable sequence of unfolding stages in the growth of a child's intelligence is clearly congruent with the multiple failings, dead ends, and retrogressions of biological evolution. Piaget accordingly to reject orthodox Darwinism in favour of evolution with a built-in principle of progress, a theory presaged by the Lamarkian aspect of his early work, he smells.

Rotman lays out the intricate relations to Piaget's oeuvre with great clarity as one could wish for (unless one happens to be a adept of the dogmas). As a mathematician, he is able to bring his expertise to bear on the bizarre account of mathematics, and to expose it as tendentious hogwash. Correspondingly, he is less well equipped to deal with the psychological weaknesses of Piaget's theory. He correctly emphasizes the inadequate account of language that it contains, I believe, rather too much. But the deficiencies.

Contrary to the principles of genetic epistemology, for example, an individual's ability to understand depends in part on the context in which he is reasoning about it, temporary to display his best ability depends on his cultural background. According to conventional Piagetian tests, Australian Aboriginal adults appear not to know that if water is poured from a standard vessel into one that is taller and thin, its quantity is not increased. But a people's general thought in this area is most unlikely to have remained unchanged very long in the middle of the desert.

What is the secret of Piaget's success? The answer is that he has been dominated by the quest for truth, central thesis and method immune from experimentation. Likewise, to echo a frequently repeated criticism of Freud, his theory is based almost exclusively on middle-class European children. It is a striking irony that a man who has had so much of an influence upon pedagogical theories should have failed to take into account the effect on going to school on the sort of which children think.

P. N. Johnson-Laird

Striking a modern chord

The Psychology of Music
by John Booth Davies
Hutchinson, £8.95
ISBN 0 09 129500 9

Here is a serious book about people and music written by a relatively young psychologist with a keen interest in music and, according to the blurb, no mean competence as trumpeter and pianist "in several successful jazz bands". The approach differs from some previous treatments in being primarily a psychologist's view of music, rather than a musician's view of psychology. This is the author's own assertion, but frequently he also seems to be writing from the point of view of the musician.

The style is largely descriptive, often speculative, never stuffy or dogmatic, always devoid of pseudo academic or scientific gobbledegook, with the occasional refreshing glimpse of fun behind the seriousness of the topic (why his preference for "big" blondes? page 171). No musician, composer, teacher or performer, need fear that he would be wasting his time in starting to read this book on the grounds that it would be unintelligible to him. The narrative is lucid and illuminated by analogies from everyday experience; his explanations of, for example, frequency and pitch are clear.

To the best of my knowledge, no British author has produced a major book on music and psychology since 1968, when Rosamund Shuter's *The Psychology of Musical Ability* appeared, nor an American since 1971, with Edwin Gordon's *The Psychology of Music Teaching*. Thus Dr Davies's new book is, welcome. Both Shuter and Gordon deal extensively with the more specialized field indicated by their titles. Davies deals with music and psychology in a more general way. Not unexpectedly there is some overlap. Davies, like Gordon, has produced his own measures of musical aptitude and he not only devotes chapters seven and eight specifically to this, but chapters nine to 12 are closely associated with it. Furthermore, while he is not primarily concerned with music education, he has a little to say about this, including the statement that many teachers refuse to admit: "Some children actually *dislike* music . . . we may in fact be tormenting some children by forcing music lessons on them." By implication, because it should lead to greater understanding, the whole book is about music education.

Although there may have been no major books on the psychology of music for some time, there has been a great increase of papers and articles during the last decade. Davies's extensive bibliography of some 300 items includes nearly 200 since 1955 and of these, 130 were published since 1965. It is useful to have these listed; even more useful to have them discussed in the text. At the same time, it is greatly to note that some major works of the nineteenth century and of the first half of the twentieth century are by no means neglected; reference back to such earlier work is particularly notable in the fascinating, if inconclusive, chapter 11 on consonance and dissonance.

One main idea recurs: that music is "in the ear of the listener", that "musical ability is primarily a mental ability". Moreover, how one reacts to it, as "good" or otherwise, also depends on the listener's previous experience and knowledge, and his expectations.

Referring to criticism that tests of aptitude, abilities, skills are not really musical", Davies maintains that "there is no evidence and reason why they should". They are tests, not works of art. Musicians who are also scientists need to remind themselves of this periodically.

In addition in the chapters on aptitude and abilities, measurement thereof, and what to measure, the author also discusses the role of scientific study of music, the physics of musical sound, the influence of earlier experiences, why one makes a tune, why different people prefer different kinds of music, and why people's preferences change.

In chapter 13 on musicians and instruments, Davies tries to discover, in not over-scientific or controlled ways, if there are any discernible personality differences among players of different types of instruments—strings, woodwind, brass, percussion. This chapter is largely anecdotal and speculative, and he might have paid more attention to recent research; but, in spite of some amusing sections, it is by no means frivolous. There is much in it to challenge further investigation.

Indeed, the whole book is informative, thoughtful and challenging. It could well be a basic text in university and college study in the field.

Arnold Bentley

BOOKS

For the US market

Measurement and Evaluation in Psychology and Education. (Fourth edition)
by R. L. Thorndike and E. P. Hagen
Wiley, £11.75
ISBN 0 471 86366 1

This book is intended as a basic text in psychological measurement. It is, fittingly, long, comprehensive in subject-matter, and clearly written. Indeed, as is the case now with many American textbooks, there is considerable emphasis on layout with sub-headings or rubies everywhere. Students will rarely face the daunting task of a page of reading.

Nevertheless I have considerable reservations about its use in higher education of the traditional kind. In some cases the material is so out of date or the discussion so simplified that it might almost be described as misleading. A few examples will illustrate the point and show that it is not restricted to pedantic minutiae of the subject.

Thus in the discussion of the structure of abilities as revealed by tests (essential for understanding aptitude tests), mention is made of the work of Vernon in the sixties, Thurstone in the thirties, and Guilford, whose model of intellect is portrayed. Now this is simply not good enough. There is no reference to the work of Horn and Knapp which casts great doubt on the Guilford model, or to the studies of Cattell and colleagues on fluid and crystallized ability.

Again in their discussion of personality inventories, there is no mention of the Cattell and Eysenck scales, although the Guilford-Zimmerman test is examined. In view of the problem of the infinity of possible factor solutions and all the empirical work relating Guilford's factors to other systems, this is misleading, and is material unsuited to degree standard work in this country. Similarly in the treatment of the MMPI test, no reference is made to the fact that, in spite of its totally different derivation which Thorndike and Hagen rightly emphasizes, personality factors account for much of its variance.

As these examples indicate, for the sake of simplicity much important knowledge has been ignored. The authors, aiming at the mass market of America have pitched the standard too low for Great Britain. They leave out what seems to be the critical and most interesting points and insert material that is unsuitable. Thus to make the point that test scores are meaningless on their own, they cite the case of two spelling tests, one of 20 easy words, one of 20 difficult ones. Clearly, a score of 15 on each is not identical in meaning. Table 4.1, however, contains the two lists, and, readers are invited to do the tests. The authors as befits their Columbia University posts are in the great tradition of John Dewey!

All this is highly critical. On the other hand as a clear, elementary text in measurement this is a good book. It is for students who need material explained in great detail, summarized in tables, and in brief concluding numbered sentences, and who like questions at the end of each chapter to see whether they understand it. The emphasis is on factual knowledge rather than psychometric insight. In brief, not a book for honours students in psychology, but perhaps suited for those who need some knowlege of psychological measurement as a part of other studies.

Paul Kline

In memory

Amnesia (second edition)
edited by C. W. M. Whitty and O. L. Zangwill
Butterworth, £9.50
ISBN 0 407 00056 9

Attempts to weld the disciplines of psychology and physiology are occasionally evident in this, the second edition of Whitty and Zangwill's important collection of essays on amnesia, but the success with which physiological disorder may be explained by current theory in cognitive psychology is rather depressing.

Disorders of the nervous system have profound effects upon behaviour, but theories of behaviour do not appear to be equipped to aid in the analysis of structural deficits. Whether this failing results from defective cognitive theory or from inappropriate attempts to interpret the hardware of the brain in terms of the software is quite beyond the scope of this review, but the more we know about brain processes the less cognitive psychologists seem to need physiological psychologists to provide them with insight.

There are a number of examples in this collection of psychologists stepping out into the world of the neurologist to gather data of the defects of memory, but with no return implications for the psychological theories which they take with them. A clinical analysis of organic amnesia in terms of a severe impairment of "long-term memory" with no effect upon "short-term memory" was useful until cognitive psychologists started to reject the distinction between these two states of storage. Piercy acknowledges the breakdown of the dichotomy of short-term and long-term storage in an excellent review of the relationship between experimental psychology and organic amnesia, but does little to reassure me that clinicians have understood the implications of this pressure upon theory. Some discussion of Wickelgren's recent comments regarding the unacceptability of neurological evidence in the debate about the dichotomy might have been particularly useful in these reviews.

Even so, an appreciation of current thought in psychology would not necessarily aid the description of amnesic syndromes. No great harm is done by the absence of appreciation, whereas the application of empirical practice in psychology to clinical problems does appear to be useful for diagnostic purposes. If this is the limit of the interaction between neurology and psychology then perhaps we should be content to accept that the currencies of our respective explanations are not exchangeable, and that a psychological explanation of behaviour will not have a base in physiology. Our understanding of the appreciation of the meaning of sentences is not developed by information about the location of lesions which produce defects in this process, and indeed a documentation of the machinery of the brain may offer no help at all in the analysis of its programming.

As a volume on amnesia this is a valuable addition to the literature, and so criticism of its attempts to describe neurological events in the currency of psychology should not form the only basis of its appreciation. It is largely an updated version of the first edition, with a new chapter by Feldman on the Freudian concept of forgetting which admits motivation as a vital factor in the analysis of what is remembered. Apart from the chapter by Gibbons and Hall Williams on legal aspects of amnesia and involuntary acts, the book largely contains documentations of the syndromes of memory following head injury, brain surgery, and electro-convulsive therapy. Chapters by Piercy, Iverson and Pratt are replacements for those not revised from the first edition, and all provide discussions which benefit the final product. One source of disappointment is possibly the most fascinating chapter in the book, Pratt's essay on the relationship between memory loss and consciousness; it states is rather short and stops as it seems to be about to say something vital about brain and mind.

Geoffrey Underwood

Prentice/Hall International
66 Wood Lane End Hemel Hempstead, Herts. HP2 4RG

Major Titles from Our Psychology List:

REFLECTIONS ON BEHAVIORISM AND SOCIETY
B. F. Skinner
Skinner in rare form: explaining why he is not a cognitive psychologist, reviewing Walden Two, discussing the relevance of behaviourism to education, ethics and individual freedom, pondering the current interest in the paranormal. A collection of his most stimulating essays of the past five years.
Spring 1978 c. 250pp £11.15.

THE PSYCHOLOGY OF HUMAN DIFFERENCES
Third Edition
Leona E. Tyler
In a society which values equality, psychological and intellectual differences cause unease and discomfiture. How can we reconcile these with our democratic faith? Dr Tyler, in this major revision of her ground-breaking 1965 book, considers the scientific evidence for human variations, reflecting changes in the field as well as the further development of her own ideas. 1977 572pp £10.45.

HUMANISTIC PSYCHOLOGY
John Shaffer
Emerging from European existentialism, humanistic psychology has been closely allied to the socio-political movements of the '60s and '70s. Now a leading practitioner and lecturer puts its contributions in perspective. Five distinct models of psychotherapy are examined: existential/experimental, client-centred, Gestalt, psychoanalytic and behavioural, with actual dialogues between therapist and patient reproduced in their entirety. March 1978 224pp Cl. 6.95 Pa. £4.15.

FOR OUR FORTHCOMING PSYCHOLOGY LEAFLET, please write to Jean Brown at Prentice-Hall. These and other teaching texts are available as Inspection Copies to qualified lecturers upon request. Prices quoted may be subject to change.

New Titles from NFER

Educational Assessment
Karlheinz Ingenkamp
European Trend Reports on Educational Research. No. 3.
This is a critical review of trends in the educational assessment of pupils and students in Europe. It contains a list of 700 research studies, many of which are not available elsewhere. £4.95

Behaviour Assessment Battery
Chris Kiernan and Malcolm Jones
This is a collection of tests, observations and interview schedules devised for use with more severely handicapped children and developed with such a population. It is intended for use in creating programmes with teachers, nurses and other professionals. £5.95

Monitoring National Standards of Attainment in Schools
Edited by Ray Sumner
To compare local and national systems of education and get an idea of the absolute standards that are being attained, it is necessary to monitor the educational achievement of pupils over a period of time. This book considers a number of issues, strategies and technical problems associated with monitoring procedures. £12.00

Undergraduate Personality by Factored Scales
Peter Saville and Stephen Blinkhorn
A large national study of British university students using the 16PF and other personality scales developed by Cattell and Eysenck. The book contains sections on arts/science differences in personality as well as comparisons between undergraduates and young adults. Also included are chapters on the reliability of the scales and their relationship to degree class, as well as a comparison between the Cattell and Eysenck models of personality. £7.00

Assessment for Transition
R Sumner and K Bradley
The book considers the aspect of pupils' attainments at the point of transfer between primary and secondary school and describes the development of materials, which fit into a simple assessment and reporting scheme, for administration in the last term of primary school as the transition period begins. £2.85

NFER Publishing Company Ltd
Darville House
2 Oxford Road East
Windsor, Berks. SL4 1DF.

Language and Insight
The Sigmund Freud Lectures at University College, London
Roy Schafer
In his previous book *A New Language for Psychoanalysis*, Schafer used ideas from contemporary philosophy to propose a new way in which to speak and think psychoanalytically about human behaviour and experience. In *Language and Insight* he applies these ideas to fundamental questions in the theory, method, and principles of psychoanalysis. £9.00.

Psychoanalysis and the History of the Individual
Hans W. Loewald
This graceful book adds a new dimension of understanding to some crucial aspects of life—particularly morality, love, and religious experience. The author stresses that the individual not only has a past, but creates his own ever-changing history in the activities of his conscious and unconscious thought processes. £5.75.

Thought, Consciousness and Reality
Psychiatry and the Humanities, Volume 2
Edited by Joseph H. Smith
This book takes up major themes in psychoanalysis and philosophy, such as the influence of reason on action, and the place of language in the life of thought. £10.80.

The Psychoanalytic Study of the Child
Volume 32
Edited by Ruth S. Eissler et al
The latest volume in this standard series for teaching and research in child analysis. £16.20.

YALE UNIVERSITY PRESS
New Haven & London
9 Bloomsbury Square, London, WC1

Growing Points in Ethology
Edited by P. P. G. BATESON and R. A. HINDE
A collection of essays by some of the most prominent and active ethologists. It is organised into four sections: motivation and perception, function and evolution, development, and human social relationships. The essays are forward looking and identify the areas of importance for the future study of behaviour.
"There is something in this book for nearly every psychologist ..."
Contemporary Psychology
Hard covers £16.00 net
Paperback £5.50 net

A Guide for Beginning Psychotherapists
JOAN S. ZARO, ROLAND BARACH, DEBORAH JO NEDELMAN and IRWIN S. DREIBLATT
This book brings a unique approach to the subject of psychotherapy and is intended to bridge the philosophical and disciplinary divisions in its treatment of the common practical difficulties psychotherapists face. *The Guide* is for therapists of all theoretical persuasions, and will also be helpful to physicians and all those involved in counselling.
Forthcoming (March) Hard covers £9.00 net
Paperback £3.50 net

Asymmetrical Function of the Brain
Edited by MARCEL KINSBOURNE
It is now well established that the hemispheres of the brain are, to some extent, asymmetrical in the functions they perform. This volume offers fifteen contributions on these asymmetrical distributions of responsibility across the brain, opening and closing with articles by Professor Kinsbourne, who has been a pivotal worker in the discipline. The articles will be consulted by physicians specialising in neurology and psychiatry, psychologists and speech pathologists.
Forthcoming (June) £18.00 net

CAMBRIDGE UNIVERSITY PRESS

STUDENT PSYCHOLOGY TEXTS
from Addison-Wesley

Third Edition
BASIC PSYCHOLOGY
H H Kendler
An up-to-date integrative presentation and clear overview of all areas of psychology, subject-by-subject and topic-by-topic, with emphasis on evidence presented. Illustrations in text help understanding. Extensive sources, thorough coverage.
780pp/illus/1974/0 8053 5204 X, World Student Series £7.50

Third Edition
PSYCHOLOGY
W J McKeachie, C L Doyle and M M Meffort
This highly successful text introduces the beginning psychology student to the field of psychology in an interesting and readable way. It covers the entire field. Important attitudinal and methodological considerations are discussed throughout.
672pp/illus/1976/0 201 04607 J, International Edition £8.50

Third Edition
FUNDAMENTALS OF BEHAVIOUR STATISTICS
R P Runyon and A Haber
This highly successful text introduces the beginning psychology student to the field of psychology in an interesting and readable way. It covers the entire field. Important attitudinal and methodological considerations are discussed throughout.
416pp/illus/1977/0 201 05549 5, World Student Series £7.50

Second Edition
INFLUENCING ATTITUDES AND CHANGING BEHAVIOUR
P G Zimbardo, E B Ebbesson and C L Maslach
This thorough revision of the highly successful text edition has a considerably streamlined presentation, new design, and includes provocative discussion of currently important papers and student research projects.
221pp/illus/1977/0 201 08786 X, softbound/£4.80

For further details of these and other Addison-Wesley texts on psychology, please write to:
Addison-Wesley Publishers Ltd
West End Manor, 11 Hills Place, London W1R 2LR
Tel: 01-439 2541

Psychotherapy:
A Personal Approach
D. J. SMAIL
A stimulating and original review of the contemporary scene in psychotherapy. D. J. Smail challenges many well-established approaches on the grounds that they place too much confidence in current scientific conception and on technical skills. Instead he considers cooperation between patient and therapist of great importance in negotiating a mutually acceptable view of the former's situation and encouraging him to accept responsibility for it.
£5.95

Now available in paperback and hardback
Perceiving Women
Edited by
SHIRLEY ARDENER
'Mrs Ardener is to be commended for having brought together this valuable collection of papers. She has explained and clarified our understanding of a theoretical approach which promises to be of considerable significance in the study of human society.' T.L.S.
£6.95 hardback.
£2.95 paperback.

The Secrets of Sexual Fantasy
GLENN WILSON
Important findings following scientific investigations in medical institutions and universities throughout the world. Glenn Wilson also includes his own survey of sexual fantasy patterns.
£4.95 March 21.

DENT

BOOKS

Frameworks of understanding

New Perspectives in Personal Construct Theory
edited by D. Bannister
Academic Press, £10.80
ISBN 0 12 077940 4

The concepts and methods introduced by the late G. A. Kelly have been in wide circulation for more than 20 years. Briefly, Kelly argued that a person makes sense of the circumstances and events of his life in terms of an organized system of constructs. This "personal construct system" is basically adaptive, in the sense that it enables a person to reconstruct his past and to anticipate future events; its contents and organization, however, may need to be changed, perhaps by psychotherapy, in the interests of good personal adjustment.

The book attempts to illustrate the continuing value of this broad approach, not by giving a clear and concise description of the latest research achievements, but by presenting a diverse set of essays, reports, and commentaries by 15 contributors, including Kelly and the editor D. Bannister. As might be expected, the scientific quality of the contributions varies widely: there is a certain amount of repetition, and no integration overall. To be fair, the editor's intention is to show the value of personal construct theory as a source of inspiration and as a wide-ranging methodological framework.

Nevertheless, the contributions have to be judged on their individual merits. The opening chapter on "The Psychology of the Unknown" is an undated essay by Kelly not previously published. In it, he outlines his philosophy of science, which he calls "constructive alternativism". This is the view that people should be prepared continually to reconsider alternative perspectives to frame works of understanding about themselves and their world, and have the courage to test out their ideas through action.

Bannister attempts to correct the widespread misconception that the emotions are outside the scope of personal construct theory. McCoy attempts to describe and analyse emotions in terms of personal construct theory; but the question is whether much is gained beyond spelling out some of the expectancies commonly found in emotions like doubt, guilt, love, and so on. The repertory grid data in Brunsella's chapter seem too condensed for rapid comprehension; they are discussed in the context of social stereotypes and sex role differences. Karst and Grount raise some interesting issues regarding the construct systems of people in a commune.

Mair gives some good illustrations of the use of metaphor in the reconstruction of people's views of themselves, such as thinking of one's conflicting views as a community of subselves that must learn to live in harmony. Like most of the other chapters in the book, this one discusses ethical issues alongside scientific ones. Indeed, in some chapters the shifts from normative to positive issues, and from rhetoric to empirical description, are so numerous and rapid that one wonders whether the authors are fully aware of the differences between them as regards criteria for sound argumentation. Mancuso's attempt to take the phrase "man as a scientist" literally is probably the best example of the difficulties and confusions that arise at the intersection of positivistic and humanistic accounts of human nature.

Stefan provides a[n] example of the missing [g]ap with scientific analysis [th]at nation of cure (control) [o]f deals, among other topics, [a]s of the suicidal person's [c]onstruct system, which seems to des[cr]ibe a highly defensive myth [a]bout self.

Stringer's ethical and [p]olitical viewpoints on architecture [a]nd planning are quite explicit, while [t]he implications for personal [c]onstructs are not worked out.

The chapter by Norris on [p]ersonal constructs of young [c]hildren in a detention centre is too [s]hort for rapid appreciation. [H]e gives a long commentary [o]n Piaget's effort after meaning; [t]his could have been helpful to have [b]een illustrated with examples and suggestions [f]or applications.

Radley's timely reminder [o]f the connections between Kelly's theory and those of Polanyi leave[s] us wondering, however, whether [p]ersonally all that complicated [t]heorizing is where one goes from there. [M]argetts's chapter gives a series of clear examples of the new [p]rocedures and uses in which personal [c]onstruct methodology can be put. [I]n the final incidentally, the wide scope [o]f the psychological framework within which personal constructs [a]re considered, especially as regards [l]anguages, social class differences, [e]ducation and counselling.

In the final chapter, [B]annister examines the advantages [a]nd disadvantages of having [a] formal theory, having a "problem" of [a]greement. In so doing, he [d]iscusses personal construct systems [e]xplored and modified.

In short, the book [p]resents a diverse collection of [i]nteresting viewpoints and illustrations [o]f personal construct psychology [t]hat will be appreciated most by [r]eaders who are already familiar with [w]ork carried out in this area.

D. B./e

This week's reviewers

Arnold Bentley is reader in education (music) at Reading University and author of Musical Ability in Children and its Measurement; John Bowker is professor in the department of religious studies at Lancaster University;

D. B. Bromley is professor of psychology at Liverpool University. His most recent book is Personality Description in Ordinary Language;

Dr Anthony Clare is a clinical psychologist at the Institute of Psychiatry and author of Psychiatry in Dissent;

H. J. Fletcher is lecturer in plant biology, school of pharmacy, Robert Gordon's Institute of Technology;

Professor F. K. Hare is in the departments of geography and physics at the University of Toronto and is the author of many books and papers on climate;

Dr Philip Johnson-Laird is reader in experimental psychology at Sussex University. His books include The Psychology of Reasoning and Perception and Language;

Dr Paul Kline is reader in psychometrics at Exeter University. He is author of many books and papers in the field of psychological measurement;

David Martin is professor of sociology at the London School of Economics. His book A General Theory of Secularization is to be published later this year;

Dr R. C. Richardson is head of the history department at King Alfred's College of Higher Education, Winchester. He is author of The Debate on the English Revolution;

Dr Allan Rodway is reader in English at Nottingham University;

Professor Sinclair Rogers is head of the department of communications at Ulster College and is author of They Don't Speak our Language;

H. R. Schaffer is professor of psychology at Strathclyde University. He is author of The Growth of Sociability and The Origins of Human Social Relations;

Dr Geoffrey Underwood is lecturer in psychology at Nottingham University and author of Attention and Memory.

Maths & Physics books from Butterworths

MATHEMATICAL MODELLING
Edited by J G ANDREWS and R R McLONE
Contents: Mathematical Modelling — The Art of Applying Mathematics; Slowing Problems; Why Build Three-Stage Rockets?; Legal Fees from a Container Molecular Biology; Drilling Holes with a Laser; Strain Analysis; Structures; and the Birth of the Finite Element Method; Population Models; A Differential Model of Diabetes Mellitus; Social Models for Road Traffic Situations; A Business Planning Model; The Control of the Cradle Structure in a University; A Mathematical Model for Motor Insurance; A Military Application of Game Theory; Network Flow Models; Urban Structure Stability and Catastrophe Theory; Mathematical Models.
1976 280 pages 234 156mm 0 408 10601 8 £3.95

TIME SERIES ANALYSIS AND FORECASTING
The Box-Jenkins Approach
O D ANDERSON, Civil Service College, London.
Contents: Introduction; Autocorrelation; Box-Jenkins Autoregressive processes; Moving average processes; Mixed processes; Identification; Estimation; Diagnostic checks; Forecasting; Integrated processes; Seasonal models; Forecasting; How the models arise; Stationarity; Autoaggregation Portmanteau; Appendix 1: Collection of time series; Appendix 2: Identification programme; Appendix 3: Derivation of prof; References; Index.
1976 192 pages 216 × 138mm 0 408 70926 X £4.50

USE OF MATHEMATICAL LITERATURE
Edited by A R DORLING, The British Library
Contents: The Role of the Literature in Mathematics; Major Organizations and Journals; Reference Material; Mathematical Education; History of Mathematics; Logic and Foundations; Combinatorics; Algebra and Algebras; Group Theory; Measure and Probability; Complex Analysis and Special Functions; Convexity; Topology; Mathematical Programming; Index.
1977 272 pages 216 × 138mm 0 408 70913 8 £12.00

SOLAR ELECTRICITY
An economic approach to solar energy
WOLFGANG PALZ, Solar Energy Development Programme, Commission of the European Communities, Brussels.
Contents: Introduction; Energy Overview; Solar Energy Conversion; Solar Electricity; Prospects of Solar Power for Large-Scale Electricity Production; Outlook; Appendix 1—Fundamentals of Direct Solar Energy Conversion by Means of Solar Cells; Appendix 2—Survey and Comparison of Small-Scale Independent Power Plants; Appendix 3—Conversion Factors; References; Index.
1977 352 pages 216 × 138mm 0 408 70910 3 (Butterworths) 92 3 101427 7 (Unesco) £16.00

Order Now from your local bookseller or from
BUTTERWORTH & CO. (PUBLISHERS) LIMITED
Borough Green, Sevenoaks, Kent TN15 8PH

Classified Advertisements Index

Appointments vacant
Universities
Fellowships & Studentships
Polytechnics
Technical Colleges
Colleges and Institutes of Technology
Colleges of Education
Colleges of Further Education
Colleges and Institutes of Higher Education
Colleges and Departments of Art
Research Posts
Administration
Overseas
Adult Education
Librarians
General Vacancies
Official Appointments
Appointments wanted
Other classifications
Awards
Announcements
Exhibitions
Personal
Courses
Holidays and Accommodation

Universities

The Open University

ACADEMIC APPOINTMENTS

Lectureships

Technology
We have posts in the following subject areas:
★ Design
★ Electronics and Communications
★ Engineering Mechanics
★ Materials
★ Systems
Applicants should have an interest in more than one of these subject areas and be able to demonstrate teaching, research and industrial experience, and the ability to communicate in writing. (Ref. LT2)

Psychology of Education
The first task will be to remake the course "Personality and Learning". Applicants should have knowledge of and interest in one or more of the following: Chief development; psycholinguistics; personality theory; classroom processes; adolescence; educational and psychological measurement; educational research. Preference will be given to those with published research in these areas. (Ref. LE2)

Religious Studies
The Faculty of Arts needs a Lecturer to share in the updating of existing courses, particularly "World Religion", and in the preparation and maintenance of interdisciplinary courses. A wide range of competence in religious studies is required, preferably combined with a specialist qualification related to Hinduism, Buddhism or Islam. (Ref. LR2)

Staff Tutors
Staff Tutors are concerned with tutorial aspects of the University's courses. Their duties include liaison with central academic staff involved in writing and evaluating courses; assistance to the Regional Director in the appointment, training and supervision of part-time tutors; tuition in study centres, day schools and residential Summer Schools as required. There will be considerable evening work and travel. Applicants should be honours graduates, and preferably have had experience of teaching in the Higher Education sector.
We currently have four vacancies:
(1) Location: S.E. England. Faculty: Technology. (Ref. TS2)
(2) Location: London. Faculty: Technology. (Ref. TL2)
For posts 1 and 2 we shall consider applicants with an academic background in Design, Electronics, Systems, or Engineering Mechanics.
(3) Location: East Anglia. Faculty: Mathematics.
We are looking for expertise in statistics, computing or applied mathematics.
(4) Location: Northern Ireland. Faculty, Arts. (Ref. TA2)
For this post, applicants should have general competence in Arts disciplines other than History or Art History.
All Lecturer and Staff Tutor posts are permanent. Initial salary will be within the range £3,343-£4,190 on the Lecturer scale (which is under review), except in cases of secondment. There are USS and other benefits.

Course Co-ordinators
In our system, Course Co-ordinators are the vital link men and women between the academic authors, who create the courses, and the operational staff who put them into production and distribute them to students. Called upon to perform an administrative task, they also need an interest in the subject and will be invited to contribute to course development and maintenance.
We have a vacancy in the Faculty of Social Sciences for a geographer, preferably an honours graduate, who will initially be responsible for the updating of our Geography courses — "Regional Analysis and Development" and "Fundamentals of Human Geography". (Ref. CP2)
In the Faculty of Technology we need a science or engineering graduate (final year undergraduates will be considered) to assist in the development of teaching texts and assessment material for our new Foundation course. (Ref. CT2)
The Post-Experience Courses Unit has two vacancies. Both are for an initial period of three years only. Recent graduates will be preferred and should, if possible, have teaching experience. The courses concerned, "Language Development" and "Curriculum Review and Pupil Assessment", are being produced in the In-Service Education of Teachers Section of the Unit. (Ref. CP2)
The salary for these posts is under review, but currently £2,904-£4,811. The national Universities Superannuation Scheme applies, and there are attractive benefits, including six weeks' annual leave.

Further particulars for all these posts and an application form are available, by postcard request please, from The Personnel Manager, The Open University, P.O. Box 75, Walton Hall, Milton Keynes MK7 6AL, or by telephone from Milton Keynes 63868. (24-hour answering service.) Please quote the reference number of the post you seek.
Closing date for application: March 10, 1978.

Queen's University of Belfast

Secretary to the Academic Council
The Queen's University of Belfast invites applications for the post of Secretary to the Academic Council on the retirement of the present holder on 30 September, 1978. Following a general reorganisation, the new holder of this post will be one of two senior officers in the University of equal standing each responsible for a separate administrative division and each responsible to the Vice-Chancellor. The Academic Council controls the internal academic affairs of the University, the Senate being the governing body. Experience in university academic work is essential. Salary £11,175 subject to review. Membership of F.S.S.U. or U.S.S./U.S.D.P.S. required.
Further particulars may be obtained from the Vice-Chancellor to whom applications should be sent by the closing date of March 16, 1978. The Queen's University of Belfast, Belfast BT7 1NN, Northern Ireland.

University of Nairobi Kenya
Applications are invited for the following posts:
DEPARTMENT OF CROP SCIENCE
SENIOR LECTURER
Applicants should have a basic degree in Agriculture or Horticulture plus a Ph.D. in Agronomy, Agricultural Botany, Crop Physiology, Plant Breeding or Crop Protection. Experience in teaching and research is essential. The applicant should participate in teaching undergraduate and postgraduate courses and in the department's research activities.
DEPARTMENTS OF SOIL SCIENCE AND BOTANY (MIRCEN PROJECT):
SENIOR LECTURER/ LECTURER (Microbiologist)
Applicants should possess a Ph.D. in either Soil Science or Microbiology with considerable relevant university teaching and research experience in legume bacteriology. Expertise on nitrogen fixation entailing rhizobia-legume symbiosis is a desirable advantage. The appointee will be expected to teach undergraduate and postgraduate courses, conduct research on nitrogen fixation in collaboration with the University of Nairobi UNEP/UNESCO/ ICRO (MIRCEN) project.
Appointment will be on contract for two years. Salary scales: Professor K£8,832-K£9,552 p.a. Senior Lecturer K£2,988-K£3,804 p.a. Lecturer K£2,016-K£2,312 p.a. (K£1 equals £1.50 sterling). The British Government may supplement salaries in range £3,354-£4,874 p.a. (sterling) for married appointees and £2,184-£3,354 p.a. (sterling) for single appointees. Travelling expenses and normally free of all tax) and provide children's education allowances and holiday visit passages. Terms of service include family passages, superannuation and medical aid scheme; subsidised housing and various allowances. Full details and applications (2 copies) with curriculum vitae and naming 3 referees to be sent to Registrar, University of Nairobi, P.O Box 30197, Nairobi, Kenya, by 15 March, 1978. Applicants resident in UK should send one copy to Inter-University Council for Higher Education Overseas, 90/91 Tottenham Court Road, London W1P 0DT. Further details may be obtained from either address.

WOLFSON COLLEGE, OXFORD

JUNIOR RESEARCH FELLOWSHIPS
Applications are invited from men and women, preferably under 30, for the following:
(a) About 12 non-stipendiary Junior Research Fellowships, without limitation of subject, for two years in the first instance, from 1st October, 1978.
(b) A stipendiary Junior Research Fellowship in Chinese Studies for three years from 1st October, 1978. Chinese Studies will be understood as covering all aspects of the study of China from the earliest times to the present. Stipend not less than £2,642 p.a. with the usual College facilities.
Further particulars can be obtained from the President, to whom any enquiries should be addressed.

GRADUATE AWARDS
The College also proposes to make a number of Graduate Awards in both arts and sciences for postgraduate work leading to a higher degree or diploma. Each award will be worth up to £130 p.a. Further details and a form of application may be obtained from the College Secretary (Ref. A).

UNIVERSITY OF LEEDS
School of Mathematics
Department of Pure Mathematics
Applications are invited for the CHAIR OF PURE MATHEMATICS which will fall vacant by the resignation of Professor G. N. Alban on August 31, 1978. Preference will be given to applicants in the fields of analysis, logic and topology. The salary will be not less than the minimum of the professorial range (£9,106 per annum, under review). The University reserves the right to consider for appointment persons other than those who submit formal applications.
Applications (two copies), stating age, qualifications and experience and naming three referees, should reach the Registrar, The University, Leeds LS2 9JT (from whom further particulars may be obtained not later than April 17, 1978, quoting reference No. 61/5. Applicants from overseas may apply in the first instance by cable, naming three referees, preferably in the United Kingdom.

BIRMINGHAM
THE UNIVERSITY
DEPARTMENT OF MATHEMATICAL STATISTICS
TEMPORARY LECTURESHIP IN MATHEMATICAL STATISTICS
There is a vacancy for a temporary lecturership for the two year period 1st September, 1978 to 31st August, 1980 during the visiting appointment of a member of staff overseas. Candidates should have an active research interest in a branch of probability or statistics, which may be pure or applied. Teaching in the department is at both undergraduate and postgraduate levels.
Salary on the scale £5,535 to £6,645 plus superannuation (currently under review).
Further particulars may be obtained from the Assistant Registrar, Science and Engineering, University of Birmingham, P.O. Box 363, Birmingham B15 2TT, to whom applications (3 copies) including curriculum vitae and naming three referees should be sent by 17th March, 1978.
Please quote reference TES.

LEEDS
THE UNIVERSITY
SCHOOL OF ENGLISH
Applications are invited for the post of LECTURER in AMERICAN LITERATURE in the above School.
Salary on the lecturer scale £3,333 to £6,666 (under review).
Application forms and further details may be obtained from the Registrar, The University, Leeds LS2 9JT, quoting reference number 3/7/A.
Closing date for applications March 16, 1978.

CAMBRIDGE
THE UNIVERSITY
PHILOSOPHY
Temporary Faculty ASSISTANT LECTURER for fixed term of two years from 1 October, 1978, to lecture on philosophy of science. Pensionable salary on scale currently £5,067 to £6,403.
Further information from the Secretary, Philosophy Faculty, Sidgwick Avenue, Cambridge CB3 9DA. Closing date 20 March, 1978.

BUCKINGHAM
UNIVERSITY COLLEGE
LECTURER IN ECONOMICS
Interest in financial economics desirable but not essential.
USS/UBS.
Particulars from Registrar, Hunter Building, Buckingham MK18 1EG. Apply by 15 March.

THE UNIVERSITY OF MANCHESTER
SECRETARY FOR EXAMINATIONS
Applications are invited for this post in the Registrar's Department. The person appointed will be responsible for the conduct of University examinations. Candidates should hold a first or upper second class Honours degree and/or higher degree, and should have had substantial experience either of organizing University or public examinations or of University administration. Salary will be not less than £8,106 p.a. (under review). Duties to begin May/June 1978 if possible. Particulars and application forms (returnable by March 9, 1978) from the Registrar, The University, Manchester M13 9PL. Quote ref: 209/77/THES.

Universities continued

UNIVERSITY OF NEW SOUTH WALES
Sydney, Australia

FACULTY OF MILITARY STUDIES

LIBRARIAN

The University has established a faculty of Military Studies at the Royal Military College, Duntroon, ACT, and is cooperating with the Department of Defence in its operation and development within the context of the Commonwealth Government's intention to establish by legislation a Defence Force academy as an autonomous university n a new site at Duntroon adjacent to the Royal Military College. The academy is scheduled to accept its first students in 1982.

Undergraduate courses in the Faculty lead to the award by the University of degrees in Arts, Science and Engineering. All departments engage in research and there are opportunities for postgraduate students to work towards higher degrees of the university. These activities will continue in the academy.

Applications are invited for the dual position of Librarian of the Bridges Memorial Library o (the Royal Military College and Librarian-designate for the academy. The Librarian will be responsible initially for both the operation of the Bridges Memorial Library and the planning and commissioning of the academy's library. Appointment will be to the staff of the university. On establishment of the Defence Force Institution the staff of the Faculty including the Librarian will transfer to its employ.

Applicants should have appropriate academic qualifications, be eligible for professional membership of the Library Association of Australia, and have considerable experience in academic libraries, particularly in the area of library administration. It is also desirable that applicants have some experience in library planning.

Further information may be obtained from the Dean of the Faculty, Professor J. C. Burns, in the University.

Salary: $A31,428 per annum.

The university reserves the right to fill the position by invitation.

Details and conditions of appointment can be obtained from the Secretary General, Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1 H0PF.

Applications close on April 28, 1978.

UNIVERSITY OF DUBLIN
Trinity College

PROFESSORSHIP OF LAWS

Applications are invited for appointment to this new Chair. There is no restriction as to subject, but it is expected that the successful candidate will have interests in Land Law or European Community Law or some other field complementary to those of the Regius Professor of Laws (R. F. V. Heuston).

Persons interested should write for further particulars to:

The Secretary, Trinity College, Dublin 2,
to whom applications should be sent, preferably before 23rd March 1978.

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

LECTURER IN ENGLISH

Applications are invited for a newly created lectureship in the Department of English and Drama. An interest in Renaissance studies would be an advantage.

Salary within scale £3,333-£6,655 (under review). It is hoped to appoint within the lower half of the scale. Postcard requests for application forms and further details from Paul Johnson, Establishment Officer. Ref. 78/04EA.

Loughborough Leicestershire

UNIVERSITY COLLEGE DUBLIN
DEPARTMENT OF FRENCH

Applications are invited for a post as

Assistant Lecturer in the Department of French

Preference will be given to a candidate able to teach in two of the following fields: 20th century novel; film as an academic discipline; drama from 1030 to the present; 18th century studies.

The current salary scale is in the range: £3,681-£6,061. Entry point on this scale will be in accordance with qualifications and experience. Family allowances or equivalent will be paid and there is a non-contributory pension scheme. An alternative contributory scheme is also available.

Prior to application, further information (including details of application procedure) should be obtained from: Mr. J. P. MacHale, Secretary and Bursar, University College, Belfield, Dublin 4. Tel. 693244, ext. 431. The latest date for receipt of completed applications is Thursday, 6th April, 1978.

THE ENGLISH DEPARTMENT OF BONN UNIVERSITY

invites applications for the

post of LEKTOR

Applicants should have at least a second class degree in Applied Linguistics, English as a Foreign Language, English, or German, a thorough knowledge of German, and previous teaching experience. Courses will include conversation, German-English translation, phonetics, grammar and British or American Life and Institutions. Salary scale according to BAT II. The appointment will be made for one year from October 1, 1978; an extension for two more years is possible. Applications should reach the

Geschäftsführender Direktor des Englischen Seminars der Universität Bonn,
5300 Bonn, Regina-Pacis-Weg 5,
not later than March 15, 1978.

UNIVERSITY OF STRATHCLYDE

Applications are invited from postdoctoral experimental physicists for a

LECTURESHIP in the DEPARTMENT OF NATURAL PHILOSOPHY

Applicants should have practical knowledge and experience of high-voltage technology and an interest in charged particle beams and/or plasma physics. The successful candidate will be required to participate in general undergraduate and postgraduate teaching to physics and in the research interests of the Department.

Salary scale, £3,333 to £6,644 per annum (under review) with placing according to qualifications and experience. Superannuation benefit.

Application forms and further particulars (quoting 12/78) and enclosing a self-addressed envelope (9in. x 4in.), may be obtained from the Academic Appointments Officer, University of Strathclyde, Royal College Building, 204 George Street, Glasgow G1 1XW, with whom applications should be lodged by March 13, 1978.

UNIVERSITY OF BRADFORD

CHAIR IN INDUSTRIAL TECHNOLOGY

Applications are invited for this recently established Chair to develop interdisciplinary education relating aspects of engineering, natural and social sciences relevant to the management of industrial production processes. Further particulars from the Registrar, University of Bradford BD7 1DP, to whom applications should be submitted by Monday, April 10, 1978.

UNIVERSITY OF BRADFORD

LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

INTERNATIONAL BUSINESS

Applications are invited for a LECTURESHIP in International Business in the Department of Management Studies. Preference will be given to applicants specialising in international marketing, but those specialising in other aspects of international business are encouraged to apply. Applicants should be graduates with an appropriate first and/or higher degree, preferably with industrial, commercial, or professional experience.

Salary within scale £3,333-£6,655 (under review). It is hoped to make an appointment on the lower half of the scale. Postcard requests for further particulars and application forms to Paul Johnson, Establishment Officer. Ref. 78/06MS.

Loughborough Leicestershire

CHRIST CHURCH OXFORD

Applications are invited for the post of

ASSISTANT CURATOR

in the Picture Gallery. The College expects to appoint, for a period not exceeding seven years, a person in his mid-twenties with high qualification in the History of Western Art. The salary for a person living in College will be between £2,750 and £3,250, depending on age and qualifications, and for a person living out of College between £3,300 and £3,850.

The person appointed will take up his duties by the end of March, 1978, or as soon as possible thereafter. The post is open to men or women.

Applications, naming two referees, should reach the Dean, Christ Church, Oxford (from whom further particulars may be obtained) not later than 8th March.

UNIVERSITY OF BRADFORD

CHAIR IN MANAGERIAL ECONOMICS

To coordinate the teaching of managerial economics at undergraduate, postgraduate and post-experience levels, and to exercise research leadership within the Management Centre with responsibilities for some economics inputs to courses elsewhere in the University. Commencing stipend will depend upon the qualifications and experience of the successful candidate but will not be less than £9,105 per annum. (Currently under review.) Closing date for applications March 31, 1978. The further particulars relating to this Chair are obtainable from The Registrar, University of Bradford BD7 1DP, but informal enquiries may also be made of Professor J. C. Higgins, the Director of the Management Centre.

UNIVERSITY OF BRADFORD

BELFAST
The Queen's University

RESEARCH ASSISTANTS
DEPARTMENT OF PHYSIOLOGY

Two Research Assistantships are available in the Department of Physiology. The successful applicants will be graduates, preferably holding a first or second class Honours B.Sc. degree. Appointment is tenable initially for one year and may be renewed annually for a further five years.

Salary scale (under review): £2,904-£4,190, initial placing dependent upon age and qualifications.

Applications giving a full curriculum vitae and the names and addresses of two referees should be addressed to the Personnel Officer,

The Queen's University of Belfast,
BT7 1NN, Northern Ireland
Closing date: 22nd March, 1978.
(Please quote Ref. 78/THES)

UNIVERSITY OF LEEDS

Department of Social Policy and Administration

Applications are invited for the post of RESEARCH FELLOW to join a major study of Sheltered Housing for the Elderly funded by the Joseph Rowntree Memorial Trust and the National Corporation for the Care of Old People. Appointment will be from April 1, 1978, or as soon as possible thereafter for a period terminating on September 30, 1981.

Salary in the range £3,333-£4,811 of the 1A scale for Research and Analogous Staff (under review).

Applications should be addressed to the Registrar, The University, Leeds LS2 9JT, from whom further particulars and forms of application may be obtained. Closing date for applications March 13, 1978. Please quote reference number 35/4D.

UNIVERSITY OF WESTERN AUSTRALIA PERTH

Applications are invited for the appointment of

DIRECTOR, EXTENSION SERVICE.

Candidates should have had extensive experience in the field of extension or adult education in a tertiary institution. A high degree of administrative ability and competence in programme planning and supervision are prerequisites for the appointment. The salary will be that of a Professor, currently $A31,248 p.a. Benefits include superannuation similar to FSSU, fares to Perth for appointee and dependent family, removal allowance, study leave and long service leave and housing loan scheme.

Before lodging an application intending candidates should seek further information, including conditions of appointment and aims and activities of the Extension Service, from the Staffing Officer, University of Western Australia, Nedlands, Western Australia, 6009, or from the Secretary General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF. Thereafter applications in duplicate stating full personal particulars, qualifications and experience should reach the Staffing Officer by 1 April, 1978. Candidates should request three referees to write immediately to the Staffing Officer.

EAST ANGLIA
THE UNIVERSITY NORWICH

LECTURER IN COMPUTING STUDIES

Two posts tenable from 1 September, 1978.

Preference will be given to candidates having appropriate qualifications and experience in one or more of the following areas: Systems Software, Real-time Applications of Computers, Data Processing and Large Scale Information Systems. Salary on the scale £3,333 to £6,6[illegible] (under review).

Applications (one copy only) giving the names of three persons to whom reference may be made, should be lodged with the Establishment Officer, University of East Anglia, Norwich NR4 7TJ (telephone 0603 56161, ext. 2126) from whom further particulars may be obtained, not later than 17 March, 1978. No forms of application are issued.

In naming three referees you are particularly requested to give only the names of those who can immediately be approached.

UNIVERSITY OF THE SOUTH PACIFIC—FIJI

Applications are invited for the post of

SENIOR LECTURER/LECTURER IN ENGLISH

(Post 78/2) available in mid 1978. Applicants should possess good academic qualifications as well as teaching experience at University level. Preference will be given to applicants with research experience in TESL. The appointee is to run degree and diploma (sub-degree) courses in theory and methodology of TESL, undertake and stimulate research in the area and take active part in short term courses within the Institute of Education to improve standards of English throughout the region. Salary scales: Senior Lecturer F$11,178 to F$13,209 p.a., Lecturer F$7,040 to F$10,608 p.a. (£1 sterling equals F$1.67). The British Government may supplement salary in range £1,540 to £2,208 p.a. (sterling) for married appointee or £310 to £870 p.a. (sterling) for single appointee (normally free of all tax and reviewed annually) and provide children's education allowances and holiday visit passages. In addition the University provides 15 per cent gratuity, superannuation contribution, appointment allowance, partly furnished accommodation at a maximum rental at present of 15 per cent of salary. Appointments will be for a contract period of three years and will be renewable by mutual agreement. Candidates should send THREE COPIES of their curriculum vitae, quoting post reference and full personal particulars and names and addresses of three referees to the Registrar, the University of the South Pacific, PO Box 1168, Suva, Fiji. Applicants resident in UK should also send one copy to Inter-University Council, 90/91 Tottenham Court Road, London W1P 0DT. Closing date March 3, 1978. Further particulars can be obtained from either address.

ABERYSTWYTH
THE UNIVERSITY COLLEGE OF WALES

DEPARTMENT OF ECONOMICS

Applications are invited from GRADUATES in ECONOMICS or other appropriate disciplines for the post of RESEARCH OFFICER in the Department of Economics. The successful applicant will work on a project concerned with the financing problems of small firms.

Salary within the range £2,904 to £4,190 per annum (under review).

Application forms and particulars obtainable from the Registrar.

Closing date: 17 March, 1978.

BRADFORD
THE UNIVERSITY

PROJECT PLANNING CENTRE FOR DEVELOPING COUNTRIES

Applications are invited for a fixed-term (three years) LECTURESHIP requiring relevant practical experience and a capacity to contribute to courses in Project Planning for participants from developing countries. The post involves working in Bradford and possibly overseas. Salary within scale £3,333 to £6,655 per annum (under review). Superannuable.

Further particulars/application forms (to be returned as soon as possible) from the Registrar, Reference PPC/L/10/78, University of Bradford, West Yorkshire BD7 1DP.

EDINBURGH
HERIOT-WATT UNIVERSITY

DEPARTMENT OF ACCOUNTANCY AND FINANCE

LECTURESHIPS

Applications are invited for posts of Lecturer specialising in one of the following areas:

ACCOUNTING THEORY; FINANCIAL ACCOUNTING; MANAGERIAL ACCOUNTING; BUSINESS FINANCE.

Application forms and further particulars are available from the Staff Officer, Heriot-Watt University, Chambers Street, Edinburgh.

ESSEX
THE UNIVERSITY

LECTURER IN FILM

Applications are invited for the post of Lecturer in Film in the Department of Art from 1st October 1978.

Salary scale £3,333 to £6,655 (under review).

Candidates should have particular knowledge in the theory of film-making and interpretation and the techniques and history of the cinema. The post involves the construction of undergraduate courses in conjunction with degree schemes in Literature, Art and other departments and in relation to specialised studies of Latin America, the United States and Russia.

Applications (six copies), including a curriculum vitae and the names and addresses of three referees, should reach the Registrar (AG/THES), University of Essex, Wivenhoe Park, Colchester, CO4 3SQ, from whom further particulars may be obtained, by 17th March 1978.

BRUNEL
THE UNIVERSITY

in conjunction with HENLEY ADMINISTRATIVE STAFF COLLEGE

THE SPECIAL ENGINEERING PROGRAMME

LECTURER in ENGINEERING (Second appointment)

The University Grants Committee has provided special funds to enable us to launch a major new four year undergraduate programme — The Special Engineering Programme. It will have a thin sandwich structure, and will employ an intensive and broad based approach to the study of engineering and management systems.

The Lecturer will be a key member of the Programme team. He or she will have a major role in the design and operation of the Programme. Candidates with interests, good qualifications and experience in any branch of engineering will be considered.

A commitment to engineering education, a desire to work with industry, a wish to innovate and to make a major contribution to the development of engineers, are all essential. Experience in the project approach to teaching and an interest in engineering design are desirable. Salary on the Lecturer scale £3,333 to £6,655, plus £450 London Allowance with FSSU/USS benefits.

Application forms and further particulars from the Assistant Secretary (Establishment), Brunel University, Uxbridge, Middlesex, UB8 3PH, or telephone Uxbridge 37188, Extension 33. Closing date 31st March, 1978.

CANADA
UNIVERSITY OF TORONTO

SCARBOROUGH COLLEGE

One-year visiting or limited term professorship for 1978-79.

Duties, teaching and research in MATHEMATICS.

Salary and rank according to qualifications and experience.

Send curriculum vitae, and have 3 letters of reference sent to: Prof. John L. Dove, Chairman, Physical Sciences Division, Scarborough College, University of Toronto, West Hill, Ontario M1C 1A4, Canada.

CANADA
UNIVERSITY OF CALGARY

DEPARTMENT OF ENGLISH

Vacancy for 1978-1979

(Subject to funding)

Area: MODERN LITERATURE; CREATIVE WRITING (FICTION); COMPOSITION.

Rank, Open.

Qualifications, Ph.D. or equivalent in appropriate field; teaching experience.

Salary dependent on qualifications and experience. Current scales: Assistant Professor, $17,[illegible] to $2[illegible]; Associate Professor $2[illegible] to $3[illegible]; Professor $2[illegible] to —.

Applications, along with curriculum vitae and list of three referees, to Dr. H. Baillie, Head, Department of English, The University of Calgary, Calgary, Alberta, Canada T2N 1N4.

Commencing date July 1, 1978.

EDINBURGH
THE UNIVERSITY

DEPARTMENT OF EDUCATIONAL STUDIES

TEMPORARY LECTURESHIP IN COMPARATIVE EDUCATION

Applications are invited for a temporary lectureship for a period of one year from 1st September, 1978, in the field of Comparative Education. Salary Scale: £3,333 to £6,655 p.a.

Applications (6 copies), including the names of two referees, should be sent to the Secretary to the University, Old College, South Bridge, Edinburgh, EH8 9YL, from whom further particulars may be obtained, by 10th March, 1978. Please quote reference 1012.

EAST ANGLIA
THE UNIVERSITY NORWICH

LECTURESHIP

in SOCIAL WORK from August 1, 1978.

The person appointed will have a professional qualification in social work, and will be expected to teach courses in either Sociology and Social Work or Psychology and Social Work.

If a sociologist is appointed he/she will work in liaison with social work lecturers and with a non-professional lecturer in Sociology (Graham [illegible]) in order to develop and strengthen the sociological input to the programme.

If a psychologist is appointed, the Lecturer might assume the responsibility for teaching the course on Human Life Cycle course, and hopefully will contribute to behavioural [illegible] in the programme.

In either case, the lecturer will be expected to participate in the teaching of practice in Social Work to participate in the course administration, the professional supervision of students, development within the programme. Salary will be on the scale £3,333 to £6,655 (under review), plus USS/FSSU benefits.

Applications (one copy only) giving the names of three persons to whom reference may be made, should be lodged with the Establishment Officer, University of East Anglia, Norwich NR4 7TJ (telephone 0603 56161, ext. [illegible]) from whom further particulars may be obtained, not later than March 17, 1978. No forms of application are issued. In naming three referees you are particularly requested to give only the names of those who can immediately be approached.

Universities continued

GLASGOW
THE UNIVERSITY

DEPARTMENT OF ZOOLOGY

Applications are invited for the post of LECTURER in this department. Appointment will date from 1st October, 1978. The initial salary will be within the range £3,333 to £4,811 per annum on the Lecturers' Scale of £3,333 to £6,655 per annum according to qualifications and experience. Appropriate Superannuation Scheme will apply.

Further particulars may be had from the Secretary of the University Court (Room 18), The University of Glasgow, Glasgow G12 8QQ, with whom applications (eight copies) giving the names and addresses of three referees, should be lodged on or before 14th April, 1978.

In reply please quote Reference number 4087T.

GWYNEDD
UNIVERSITY COLLEGE OF NORTH WALES

RESEARCH PROJECT INTO THE DELIVERY OF SOCIAL SERVICES IN RURAL AREAS

Applications are invited for the post of RESEARCH OFFICER in connection with the above project which is funded by the Welsh Office and the DHSS. The project is based within the Department of Social Theory and Institutions and it has the co-operation of the Gwynedd and Clwyd County Councils.

The Research Officer would be expected to participate in some exploratory survey work but in conjunction with an existing team of two researchers will concentrate on evaluation exercises concerned with the delivery of rural personal social services. Applicants should be fully conversant with social research methodology and have relevant postgraduate research experience, preferably in the health or personal social services field. Since a good deal of the work shall be focused on the rural elderly a working knowledge of Welsh would be an advantage.

The appointment will be from 1st June, 1978, to 30th September, 1981.

Salary will be on the R. & A. Scale: £3,333-£5,627 per annum (under review).

Informal inquiries to the Project Director (Dr. Gordon Grant), Bangor 51151, Extension 449. Further particulars from the Assistant Registrar (Personnel), University College of North Wales, Bangor, Gwynedd LL57 2DG, to whom applications (two copies), should be sent, giving relevant experience and the names and addresses of three referees, by 6th March, 1978.

JOHANNESBURG
UNIVERSITY OF THE WITWATERSRAND

DEPARTMENT OF HEBREW STUDIES

CHAIR OF HEBREW

Applications are invited for appointment to the Chair of Hebrew and Headship of the Department of Hebrew Studies.

Applicants should state their qualifications in Hebrew language and literature and in related fields of study, as well as their teaching experience and research interests.

The pensionable salary range attached to the post is R11,[illegible] to R18,180, and the initial notch will depend upon the qualifications and experience of the successful applicant. In addition a generous personal non-pensionable allowance will be paid to the appointee. Benefits include a annual vacation savings bonus, medical aid and pension fund facilities and a housing subsidy, if the successful candidate is eligible.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour.

Further particulars relating to this practice are included in an information sheet obtainable from the London Representative, University of the Witwatersrand, 278 High Holborn, London WC1V 7HE, or from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa 2001, with whom applications should be lodged not later than 17th March, 1978.

JOHANNESBURG
UNIVERSITY OF THE WITWATERSRAND

DEPARTMENT OF ENGLISH

SENIOR LECTURER/LECTURERS

Applications are invited for appointment to vacancies at the above levels. Applicants should indicate clearly their special fields of interest and state the earliest date on which they are able to assume duty.

[illegible]ary will be within the Senior Lecturer: R8,460 -250 plus a 10 per cent [illegible]able allowance. Lecturer: R6,300 to R9,180 plus [illegible] per cent pensionable ance.

The initial notch and level of appointment will be determined according to qualifications and experience. Benefits include annual vacation savings bonus, pension and medical aid facilities and a housing subsidy, if applicant is eligible.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour.

Further particulars relating to this practice are included in an information sheet obtainable from the London Representative, University of the Witwatersrand, 278 High Holborn, London WC1V 7HE, or from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa, 2001 with whom applications should be lodged not later than 10 March, 1978.

JOHANNESBURG
UNIVERSITY OF THE WITWATERSRAND

SCHOOL OF LAW

VACANCIES: CHAIRS OF LAW

Applications are invited for appointment to the above posts. Three such posts are available. The branch of law for which the successful applicant will be responsible will depend partly on his qualifications and experience and partly on the needs of the School, and will be subject to negotiation.

Duties are to be assumed on 1st August 1978 or as soon as possible thereafter.

The salary scale attached to the post is R10,800 x 400—R12,600 x 600—R15,600, plus a 10 per cent pensionable allowance. The initial notch will be determined in accordance with the qualifications and experience of the successful candidates.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour.

Further particulars relating to this practice are included in an information sheet obtainable from the London Representative, University of the Witwatersrand, 278 High Holborn, London WC1V 7HE, or from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa, 2001, with whom applications should be lodged not later than 31st March, 1978.

JOHANNESBURG
UNIVERSITY OF THE WITWATERSRAND

DEPARTMENT OF EDUCATION

PROFESSOR OF EDUCATION AND DIRECTOR OF TEACHER EDUCATION

The University wishes to appoint an additional Professor of Education to serve as Director of Teacher Education. The Director will be responsible for the organisation and administration of the teacher education programme in the Department of Education. Candidates are expected to have attained a high degree of scholarship in a discipline within the field of Education.

The salary scale is R10,800 x 400—R12,600 x 600—R15,800, plus a 10 per cent pensionable allowance.

Starting salary will depend upon qualifications and experience. In addition an annual vacation savings bonus is payable. Pension and medical aid facilities are also available and a housing subsidy, if the applicant is eligible.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour.

Further particulars relating to this practice are included in an information sheet obtainable from the London Representative, University of the Witwatersrand, 278 High Holborn, London WC1V 7HE, or from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa 2001, with whom applications should be lodged not later than 17th March, 1978.

BIRMINGHAM
THE UNIVERSITY

DEPARTMENT OF MODERN HISTORY

Applications are invited for LECTURESHIP in MODERN HISTORY from 1st October 1978. Candidates must be qualified in seventeenth-century British history with interests in local history.

Salary on lower part of scale £3,333 to £6,655 (under review) plus superannuation.

Further particulars from Assistant Registrar (Arts), University of Birmingham, P.O. Box 363, Birmingham, B15 2TT, to whom applications, naming three referees, should be sent by 17th March 1978.

DURHAM
ST. JOHN'S COLLEGE

The College invites enquiries for the unsalaried post of Part-time TUTOR to be held in connection with a research studentship in any subject in the University of Durham from October, 1978. The Tutor will be responsible for the pastoral supervision of students.

The College is a Church college as well as a constituent college of the University.

Applications by 11th March, to the Principal, St. John's College, Durham, DH1 3RJ who will, if necessary, supply information about research work.

LONDON
THE UNIVERSITY

BRITISH INSTITUTE IN PARIS

HEAD OF THE FRENCH DEPARTMENT

Applications are invited for the above Paris-based post, for appointment from September 1, 1978, at the level of Senior Lecturer (salary scale at present £6,443 to £7,961 per annum).

The Institute is a teaching institute of the University of London and also has a relationship to the Universities of Paris and the British Council.

Duties include the organization and administration of university level classes and special courses in French for adult students, as well as some regular teaching.

Preference will be given to candidates aged 30 to 45, with an honours degree in French and experience in university teaching. An academic interest in either applied linguistics or present day French literature, society, art or thought will also be an advantage.

Further particulars and application forms are available from the London Secretary, British Institute in Paris, University of London, Senate House, Malet Street, London, W.C.1.

Closing date for applications—March 31, 1978.

Interviews will be held in London.

KEELE
THE UNIVERSITY

LECTURESHIP and TEMPORARY LECTURESHIP in MUSIC

Applications are invited for two posts of LECTURER in MUSIC, one of which is for one year only.

The Department was established in 1974 and has research interests which include American Music, Electronic Music, and Popular Music.

Applicants may have achievements appropriate to this context and must be able to carry out the general teaching.

Salary on first three points of Lecturers' scale, £3,333 to £3,761 per annum with membership of Universities Superannuation Scheme.

Application forms from the Registrar, The University, Keele, Staffs., ST5 5BG, to whom completed forms should be returned by 10th March, 1978.

LANCASTER
THE UNIVERSITY

SENIOR LECTURER/LECTURERS IN ACCOUNTING AND FINANCE

Applications are invited for two or more posts, one or more of which may be at Senior Lecturer level. The salaries will be fixed at appropriate points on the Senior Lecturer Scale (£6,443-£7,961) or the Lecturer scale (£3,333 to £6,655), both under review. Well qualified applicants are sought for teaching and research in accounting.

Further particulars may be obtained (quoting reference 26/C) from the Establishment Officer, University House, Lancaster LA1 4YW, to whom applications (six copies)—in the case of overseas applicants, one copy by airmail) naming three referees should be sent not later than 17th March, 1978.

BIRMINGHAM
THE UNIVERSITY

CENTRE FOR RUSSIAN AND EAST EUROPEAN STUDIES

LECTURER IN SOVIET SOCIAL INSTITUTIONS

Applications are invited for a LECTURESHIP in Soviet social institutions, duties to commence 1st October 1978.

Salary is on the scale £3,333 to £6,655 per annum (under review), plus U.S.S. The appointment is likely to be made within the first six points of the scale, but this will depend upon age, qualifications and experience.

Further particulars may be obtained from the Assistant Registrar (Senate), University of Birmingham, P.O. Box 363, Birmingham B15 2TT, to whom applications (three copies), naming three referees, should be returned by 10th March, quoting reference SD/1/78.

LEICESTER
THE UNIVERSITY

SCHOOL OF EDUCATION and DEPARTMENT OF HISTORY OF SCIENCE

M.A. (EDUCATION) HISTORY OF EDUCATION

Applications are invited from suitably qualified candidates for admission to the one-year M.A. (Education) course examined by examination papers and a dissertation.

The course consists of the study of a number of distinct periods of educational development with special emphasis on its social function.

Historiography, social theory and statistical methods of social and historical investigation allied to computer techniques are included.

There is the possibility that a limited number of S.S.R.C. quota awards may be available.

Further particulars can be obtained from: Secretary to M.A. (Education) Course, University of Leicester School of Education, 21 University Road, Leicester LE1 7RF.

LONDON
THE UNIVERSITY

QUEEN MARY COLLEGE

PURE MATHEMATICS DEPARTMENT

Applications are invited for a TEMPORARY LECTURESHIP for one year from 1 October, 1978, while Professor K. W. Gruenberg is on leave. Salary will be within range (under review) £3,333 to £3,761 per annum plus £450 London allowance.

Application forms are obtainable from the Registrar (THES), Queen Mary College, Mile End Road, London E1 4NS, to whom they should be returned by 20 March.

LONDON
THE UNIVERSITY

INSTITUTE OF HISTORICAL RESEARCH

DEPUTY EDITOR OF THE VICTORIA COUNTY HISTORY

Essential qualifications: honours degree in History or a related subject, research and editorial experience, knowledge of sources of English local history, ability to read court hand, interest in topography and buildings.

Salary on reader/senior lecturer scale, plus London Allowance.

Further particulars from Secretary, Institute of Historical Research, Senate House, London WC1E 7HU.

OXFORD
ST. HUGH'S COLLEGE

DAME CATHERINE FULFORD SENIOR SCHOLARSHIP 1978-79

The College proposes to elect to a Dame Catherine Fulford Senior Scholarship of £100 tenable from Michaelmas Term 1978. The Scholarship is open to women graduates to read for a higher degree.

Further particulars from the Principal, St. Hugh's College, Oxford, to whom applications should be sent by 11th April, 1978.

LONDON
THE UNIVERSITY

SCHOOL EXAMINATIONS DEPARTMENT

CHEMISTRY SUBJECT OFFICER

The School Examinations Department which conducts the university's G.C.E. examinations at centres in the U.K. and overseas has a vacancy for a Subject Officer in Chemistry.

The person appointed will be responsible for the administration of a number of the chemistry examinations and must possess a thorough knowledge of the subject. Teaching experience would be a great advantage, especially in those areas of the work concerned with moderation of question papers, selection of multiple-choice items for pre-testing, assembly of pretest and operational forms, checking keys, etc. Administration experience also an advantage.

The appointment will be offered on a contract basis for a period of two years.

Initial salary according to qualifications and experience will be in the range of £2,927 to £5,219 or £3,333 to £6,655 plus £450 London allowance (the scale is being reviewed at present).

Further particulars and application forms are available from Miss Jane Ritchie, School Examinations Department, 66-72 Gower Street, London WC1E 6EE. Tel.: 636 8000, ext. 60.

Completed application forms should be returned no later than March 10, 1978.

LONDON
THE UNIVERSITY

LONDON SCHOOL OF ECONOMICS

LECTURESHIP IN STATISTICS

Applications are invited for appointment from October 1, 1978, or as soon as possible thereafter to a Lectureship in Statistics. Preference will be given to candidates whose interests lies in one or more of the following fields: Economic Statistics, Econometrics, Actuarial Science, Management Science. Appointment will be on the salary scale for Lecturers of £3,333 to £6,655 a year, plus £450 a year London Allowance and superannuation benefits. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Applications should be received not later than March 10, 1978, by the Administrative Officer, Room H.610, The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, from whom application forms and further particulars may be obtained.

LONDON
THE UNIVERSITY

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

TEMPORARY LECTURESHIP IN SOCIAL PSYCHOLOGY

Applications are invited for appointment from October 1, 1978, to a one-year replacement Lectureship in Social Psychology, with special interest in developmental psychology and personality. Research experience is essential.

The appointment will be on the salary scale for Lecturers of £3,333, to £6,655 a year plus £450 a year London Allowance. In assessing the starting salary, consideration will be given to qualifications, age and experience.

Applications should be received not later than March 10, 1978, by the Administrative Officer (Room H.610), The London School of Economics and Political Science, Houghton Street, London WC2A 2AE, from whom application forms and further particulars may be obtained.

NEW ZEALAND
UNIVERSITY OF OTAGO
Dunedin

DIRECTOR SCHOOL OF PHYSICAL EDUCATION

Applications are invited for the position of Professor of Physical Education and Director of the School of Physical Education in the University of Otago, to succeed the present Director, Professor P. C. McIntosh, who is retiring from the post in 1978.

Professorial salaries, which are regularly reviewed, are fixed at various points within the range of NZ$20,804 to NZ$26,481 per annum, inclusive of cost-of-living allowances.

Further information about this appointment and about the School can be obtained from the Secretary-General, Association of Commonwealth Universities (Appts.), 36 Gordon Square, London WC1H 0PF, or from the Registrar at Box 56, Dunedin, New Zealand.

Applications close on 31 March, 1978.

NORTH WALES
THE UNIVERSITY COLLEGE BANGOR

Applications are invited for the post of PROFESSOR and HEAD of the SCHOOL of EDUCATION.

The appointment will be from September 1st, 1978, or on a date to be arranged, and the salary will be not less than £9,105 per annum (salary under review).

Further particulars can be obtained from the Secretary and Registrar, University College of North Wales, Bangor, Gwynedd, LL57 2DG.

Ten copies of the application (one from overseas candidates) together with the names of three referees should be sent to reach the Secretary and Registrar by Friday, 17th March, 1978.

OXFORD UNIVERSITY

CONTEMPORARY SCIENTIFIC ARCHIVES CENTRE

Full-time GRADUATE ASSISTANT required. Specialised experience not necessary. Appointment 1 June 1978 to March, 1980 subject to 6 months' probation. Salary scale £3,333 to £3,627 p.a. (under review).

Further particulars from Director, Contemporary Scientific Archives Centre, 10 Keble Road, Oxford OX1 3QG. Closing date 6 March.

THE OPEN UNIVERSITY

SENIOR COUNSELLOR

Applications are invited for a post of Senior Counsellor in the Open University in Wales, the headquarters of which are at Pearl Assurance House, Greyfriars Road, Cardiff CF1 3RT.

Senior Counsellors are responsible to their Regional Director for aspects of student services in the region, including the development of student counselling service, the supervision and training of part-time staff and the oversight of study centres. In addition, Senior Counsellors will be involved in day and residential schools. The successful applicant will join the existing team of three Senior Counsellors, and it is likely that the person concerned will have a major responsibility for the work involved in a geographical area of Wales, in addition to other duties arrived at in consultation with colleagues.

Applicants should be graduates with recent experience from within the broad field of adult, further and higher education. They should be interested in the development and analysis of support services for the adult learner in the multi-media teaching system of the university. Candidates who can demonstrate an understanding of the Welsh cultural and social context in which students live and work will be especially welcome.

The appointment is tenured. Initial salary will be within the range £3,333 to £4,190 (under review) on the Lecturer scale, except in cases of secondment. Normal annual increments will apply thereafter.

Further particulars and application forms are obtainable, by postcard request only, from the Personnel Manager (RCW3), The Open University, P.O. Box 75, Walton Hall, Milton Keynes MK7 6AA, or telephone Milton Keynes (63868) (there is a 24-hour answering service).

Closing date for applications, March 10, 1978.

THE OPEN UNIVERSITY

EDITORS

We are seeking experienced editors to work in the FACULTIES of ARTS and SOCIAL SCIENCES to edit teaching texts.

The Open University provides an interesting and stimulating environment in which to work. Benefits include excellent holidays, disturbance allowance and assistance with removal expenses, and membership of the universities' superannuation scheme.

The posts are permanent and appointments will be made on the Grade 1A scale (£3,333 to £5,627, under review), according to the qualifications and experience of the successful applicants.

Application forms and further particulars are available, by postcard request, please, from the Personnel Manager (LDA), The Open University, P.O. 75, Walton Hall, Milton Keynes MK7 6AA, or by telephone from Milton Keynes 63868 (24-hour answering service).

Closing date for applications: March 10, 1978.

READING
THE UNIVERSITY

DEPARTMENT OF GEOLOGY RESEARCH DEMONSTRATOR IN GEOLOGY

Required to assist with undergraduate laboratory and field classes; should have special interests in the petrology and geochemistry of crystalline rocks. Research for a higher degree will be on mineral deposition from high temperature volcanic fluids. Post available now but persons expected to graduate in summer 1978 eligible to apply. Appointment for one year in first instance, renewable. Salary in scale £2,650 to £2,700 p.a.

Further particulars from Professor P. Allen, F.R.S., Department of Geology, University of Reading, Whiteknights, Reading RG6 2AB. Closing date for applications March 13, 1978. (Ref. T.T.53A.)

READING
THE UNIVERSITY

AGRICULTURAL EXTENSION AND RURAL DEVELOPMENT CENTRE

LECTURESHIP IN THE METHODS OF ADULT LEARNING AND ADULT TEACHING TECHNIQUES

Applications are invited for the above LECTURESHIP. It is expected that applicants will have a background in the social sciences, wide experience of non-formal education related to rural development, and a special interest in simulation and the development of case study material.

The person appointed should take up duties as soon as possible after April 1, 1978.

The appointment will be for a fixed term of three years.

Further information may be obtained from the Registrar (Room 214, Whiteknights House), The University, Whiteknights, Reading RG6 2AH, by whom applications should be received not later than March 20, 1978.

READING
THE UNIVERSITY

AGRICULTURAL EXTENSION AND RURAL DEVELOPMENT CENTRE

LECTURESHIP IN THE ECONOMIC ASPECTS OF EXTENSION WORK IN RURAL AREAS

Applications are invited for the above LECTURESHIP.

Applicants should be graduates in economics, or applied economics, and preferably have had experience of aspects of the evaluation of programmes of extension or non-formal education work related to rural development.

The person appointed should take up duties as soon as possible after April 1, 1978.

The appointment will be for a fixed term of three years.

Further information may be obtained from the Registrar (Room 214, Whiteknights House), The University, Whiteknights, Reading RG6 2AH, by whom applications should be received not later than March 20, 1978.

READING
THE UNIVERSITY

AGRICULTURAL EXTENSION AND RURAL DEVELOPMENT CENTRE

RESEARCH OFFICER required from 1st April, 1978, for a fixed term until 31st March, 1981, to be one of a team of three developing the Centre's information service. The work involves writing and editing materials for distribution through a network of Third World rural development workers and maintaining communication with the recipients. The successful applicant is likely to have a postgraduate qualification in a social science related to rural development and experience of working in rural areas of the Third World. Salary in range £3,333 to £5,627 per annum (under review) plus USS superannuation.

Apply in duplicate by 25th March, quoting Reference M.H.15A, with curriculum vitae and the names of two referees to Assistant Bursar (Personnel), University of Reading, Whiteknights, Reading, Berkshire RG6 2AH.

READING
THE UNIVERSITY

CAREERS ADVISER (TEMPORARY)

Applications are invited from GRADUATES for this vacancy which will be tenable from 1st April to 30th September 1978. The duties will comprise assisting students reading arts, social science or science subjects in making and implementing career decisions. Candidates must have had several years' varied experience in one or more of the major fields in which graduates in the subjects mentioned are employed.

Further information may be obtained from the Registrar (Room 214, Whiteknights House), The University, Whiteknights, Reading RG6 2AH, by whom applications should be received not later than 25th March, 1978.

SHEFFIELD
THE UNIVERSITY

DIVISION OF ECONOMIC STUDIES

S.S.R.C. RESEARCH STUDENTSHIP

Applications are invited from British GRADUATES and STUDENTS who expect to graduate this year with a good honours degree (1st or 2.1) in ECONOMICS for a 2-year S.S.R.C. Research Studentship. The major areas of research in the Division of Economic Studies include Financial and Monetary Economics; Industrial Economics; Economics of Housing; Local Authority Investment Expenditure; Public Economics; Labour Economics. The successful candidate will have the opportunity to assist in undergraduate teaching and will be encouraged to attend appropriate post graduate taught courses given for the Degree of M.A. in Economics of Money and Finance. Candidates will be registered for the Degree of M.Phil in the first instance with the possibility of upgrading to Ph.D in due course.

For further details write to Dr P. J. Hayward, Division of Economic Studies, the University, Sheffield S10 2TN, quoting reference: R84/DI.

SHEFFIELD
THE UNIVERSITY

DEPARTMENT OF ECONOMIC AND SOCIAL HISTORY

Applications are invited from MEN and WOMEN for a TEMPORARY LECTURESHIP in the above department, tenable one year from October 1, 1978, during absence on leave of Professor S. Pollard.

Preference to candidates with special qualifications in British Economic History of the period 1700 to the present day.

Salary £3,333 a year.

Particulars from the Registrar and Secretary, the University, Sheffield S10 2TN, to whom applications (two copies) should be sent by March 6, 1978.

Reference: R80/DI.

SOUTHAMPTON
THE UNIVERSITY

DEPARTMENT OF SOCIOLOGY AND SOCIAL ADMINISTRATION

LECTURESHIP IN HEALTH VISITING

Applications are invited for the above post from suitably qualified Health Visitors with some relevant teaching experience. Possession of a degree would be an advantage.

Salary scale: £3,333 to £6,655 per annum (under review).

The initial salary will depend on qualifications and experience.

Further particulars may be obtained from Mr. C. W. L. Awang, The University, Southampton SO9 5NH to whom applications (seven copies from United Kingdom applicants) should be sent not later than March 10, 1978. Please quote reference THES/880/A.

SOUTHAMPTON
THE UNIVERSITY

ACCOMMODATION OFFICER

Applications are invited from GRADUATES or other suitably qualified persons for the post of ASSISTANT ACCOMMODATION OFFICER to assist students in obtaining suitable accommodation. It is hoped that the successful candidate will take up the appointment during the Summer. Salary on Scale £2,904 to £3,[illegible] according to qualifications and experience.

Further particulars may be obtained from Mr. [illegible] Small, (Ext. 303), University of Southampton, Southampton SO9 5NH, to whom applications (4 copies) should be submitted by 7th April, 1978. Please quote reference: 780/THES.

Universities continued

SHEFFIELD
THE UNIVERSITY
DEPARTMENT OF PROBABILITY AND STATISTICS
SCHOOLS COUNCIL PROJECT ON SPATIAL CONCEPTS IN SOCIAL EDUCATION (11-16)

Applications are invited for the post of LECTURER in GEOGRAPHY TO EVALUATE.

The person appointed will be responsible for evaluation and will be involved in all aspects of the consultation and dissemination phase of this project. Tenable two years from 1st September 1978 on the assimilated point on the salary range £4,062 to £5,613 (under review). The successful applicant will work in Sheffield but will be expected to take up residence nationally. There is a possibility of secondment. Superannuation arrangement with the existing conditions.

Particulars from the Registrar and Secretary, The University, Sheffield S10 2TN, to whom applications should be sent by 7th March, 1978. Quote Ref. R.79/B.

SOUTH AFRICA
Johannesburg
UNIVERSITY OF THE WITWATERSRAND
DEPARTMENT OF MATHEMATICS
LECTURER AND SENIOR LECTURER

Candidates should have a strong research interest in a field of mathematics. A good knowledge of statistics to degree level is desirable for each appointment.

Salary scales are as follows: Senior Lecturer: Ib1 900 by 100 to R13 900 plus R1 400 to R15 300; Lecturer: R6 300 by 300 to R10 800 plus 10 per cent pensionable allowance.

The level of appointment and initial salary will be determined according to qualifications and experience. Benefits include annual vacation savings bonus, pension and medical aid facilities and a housing subsidy, if applicable.

The University's policy is not to discriminate in the appointment of staff or the selection of students on the grounds of sex, race, religion or colour. Further particulars relating to this vacancy are included in an information sheet obtainable from the London Representative, University of the Witwatersrand, 37a High Holborn, London WC1V 7HE, or from the Registrar, University of the Witwatersrand, Jan Smuts Avenue, Johannesburg, South Africa. Staff with whom applications should be lodged not later than March 31, 1978.

WALES
THE UNIVERSITY COLLEGE ABERYSTWYTH
DEPARTMENT OF BOTANY AND MICROBIOLOGY

Applications are invited for the post of LECTURER in BOTANY. Candidates should have a special interest in an applied aspect of plant ecology, e.g., conservation, land use planning or landscaping.

Salary scale £3,705 to £6,897 per annum under review.

Application forms and further particulars available from the Registrar, Old College, King Street, Aberystwyth to whom applications should be sent by March 10, 1978.

UNIVERSITY OF WALES
LAMPETER
SAINT DAVID'S UNIVERSITY COLLEGE
Lampeter

CHAIR OF CHEMISTRY

Applications are invited for the chair of Chemistry and Head of the Department of Chemistry following the appointment of Professor David Evans to the Headship of the Department of Geography at the University of Birmingham.

Further particulars may be obtained from Mr. Gwyn Davies, Registrar, Saint David's University College, Lampeter, to whom applications should be lodged by 28th March, 1978.

NORTH WALES
UNIVERSITY COLLEGE

Applications are invited for a LECTURESHIP IN MEDIEVAL HISTORY.

Particulars including salary scale (under review) may be obtained from the Registrar, University College of North Wales, Bangor, Gwynedd LL57 2DG, to whom applications should be sent by 15th March, 1978.

YORK
NORTH EASTERN UNIVERSITIES' CENTRE

Applications are invited for the post of Director of the Unit, which exists to provide a consultancy service on matters relating to university management and administration, referred to it by the 19 member universities in the Midlands and North. The Director is based at York, Candidates should possess a degree or professional qualification together with relevant experience. Salary range £6,423 to £8,859 per annum (under review) plus superannuation. Applications (six copies of accompanying letter and curriculum vitae, giving full details of qualifications, experience and the names of three referees) should be sent to the Registrar, University of York, Heslington, York YO1 5DD, from whom further particulars may be obtained.

Closing date for the receipt of applications: March 20th, 1978.

Fellowships and Studentships

THE BRITISH SCHOOL AT ROME

BALSDON SENIOR FELLOWSHIP AT THE BRITISH SCHOOL AT ROME

The British School at Rome has recently established a Senior Fellowship, under a bequest by the late Dr. J. P. V. D. Balsdon, to enable an established scholar to reside at the School for a period of approximately six months (January to June), and to play an active part in its academic or cultural life.

The Fellowship will enable the person appointed (of either sex) to reside free of charge in the School, and is primarily intended for those who are able to take extended sabbatical leave from their normal place of appointment. The School hopes to appoint in late April a Fellow for the year 1979 and a Fellow for the year 1980.

Full particulars of the Fellowship can be obtained in writing from the Hon. General Secretary, British School at Rome, 1 Hinderton Gardens, Exhibition Road, London SW7 2AA. Applications must be received by March 23 and interviews will take place in London on April 21st.

SUSSEX
THE UNIVERSITY
SCIENCE POLICY RESEARCH UNIT

RESEARCH FELLOWSHIP

The Science Policy Research Unit has been awarded a grant by the Social Science Research Council to make an assessment of large scientific centres in the UK(1). Particular attention will be paid to any technological and educational significance in the management of these centres. A research fellow (male/female) is required, either a natural scientist or a social scientist, to work under the direction of Dr. D. Dickson and Mr. C. E. H. Pavitt and Dr. R. D. Thomas.

The qualifications for the post are primarily a good academic discipline who is familiar with the operation of large scientific centres and who is interested in the implications of such scientific work for the general management of social and scientific policy. An interest in and preferably experience of measuring the economic and technological impact of science and technology is desirable.

Application forms for this post, which is initially at the post-doctoral level, are obtainable from the Staff Records and Recruitment Officer, Sussex House, University of Sussex, Falmer, Brighton, Sussex BN1 9RH, to whom completed forms should be returned by 10 March.

WARWICK
THE UNIVERSITY
RESEARCH FELLOWSHIP IN VIROLOGY

Applications are invited for a Postdoctoral Fellowship in the Virology research group in the Department of Biological Sciences. The successful applicant will work in a small group studying the biochemistry of the DNA tumour viruses, with particular reference to their ability to transform cells. Experience of nucleic acid technology, while not essential, would be an advantage.

Starting salary will be between points 1 and 4 on the Research Fellow scale (£4,335 to £4,497) per annum (under review). The Fellowship is funded by the Cancer Research Campaign. It is available immediately and is renewable on an annual basis until September 1980.

Further details and application forms from the Academic Registrar, University of Warwick, Coventry CV4 7AL, quoting Ref. No. 29/R/78. Closing date for receipt of applications is 17th March, 1978.

BIRMINGHAM
THE UNIVERSITY
Department of Minerals Engineering

Applications are invited for a RESEARCH FELLOWSHIP in MINERAL ENGINEERING tenable until September, 1979

The project, financed by the Mineral Industry Research Organisation, involves the design, development and testing of laboratory apparatus for the measurement of physical characteristics of suspensions and sediments.

Applicants (male or female) should have a degree in Electrical Engineering, Physics or allied subjects. Experience in instrumentation and electronics together with knowledge of digital techniques would be an advantage.

Salary in the range £3,901-£5,547 (under review), (initial salary according to qualifications and experience, plus superannuation.

Applications including curriculum vitae and the names of three referees should be sent to the Appointments Officer, Metallurgy and Engineering Building, The University, Birmingham B15 2TT, to whom enquiries may be addressed (tel. 021-472 1701, ext. 4178). Please quote ref.: TMS/2.

Personal

POSTALOANS UNSECURED
£50 to £1,000
RICHMOND INVESTMENTS LTD.
4 The Green, Richmond, Surrey. 01-940 9855.

ITALY

University couple seek 2 companions to share trip own farmhouse Tuscan hills; car expenses, housekeeping, not much. Whole Easter Vacation. (Might consider transport only.)

Tel. Dr. Heumann, 0483-893623. Also warm cottage Ilkley, Yorks., available vacation/ low rent.

Polytechnics

Department of Economics & Public Administration
LECTURER GRADE II/ SENIOR LECTURER

(£3,279 to £6,585 (Bar) to £8,417 plus supplements of £465 to £492 p.a.

Applications are invited for the position of Lecturer II/Senior Lecturer in Quantitative Economics and/or Applied Micro Economics, other specialisms may be considered. The appointment will commence in early April or as soon as possible thereafter.

Further details and form of application available from the Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham. Closing date March 8, 1978.

TRENT POLYTECHNIC NOTTINGHAM

SCHOOL OF ART AND DESIGN
HEAD OF DEPARTMENT THREE-DIMENSIONAL DESIGN
(Grade IV, £6,756-£7,632 plus supplements of £492)

An opportunity to lead a talented team of Staff in a developing Department offering professional training in Theatre Design (BA, Hons), Interior Design (BA, Hons), and Furniture Design (BA, Hons).

Applicants must have appropriate qualifications and wide professional experience, and show evidence of an ability to co-ordinate and develop the work of the Department in close collaboration with industry and other departments of the Polytechnic.

For further details and form of application please send a self-addressed foolscap envelope to he Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date, 6th March, 1978.

TRENT POLYTECHNIC NOTTINGHAM

ULSTER COLLEGE
THE NORTHERN IRELAND POLYTECHNIC
Faculty of Social and Health Sciences

LECTURER II PHYSIOTHERAPY
Salary Scale: £3,744 to £5,985

Applications are invited from experienced physiotherapists for the above post. Successful applicants will be expected to teach on both the new degree and the established diploma courses. They should be prepared to contribute to course development and research programmes into the validity of therapy.

In addition to holding the appropriate professional qualifications applicants must present evidence of post-qualification study or be involved in research on development in a specialized area.

The Polytechnic is a direct grant institution with an independent Board of Governors. It opened in 1971 and now has a student population of some 7,100. It has extensive new purpose-built accommodation, including 780 residential places on the 114-acre campus overlooking the sea at Jordanstown, a pleasant and quiet residential area. There is a scheme of assistance with removal.

Further particulars and application forms which must be returned by March 27, may be obtained by telephoning Whiteabbey (0231) 66131, extension 2345, or by writing to: The Establishment Officer, Ulster College, The Northern Ireland Polytechnic, Shore Road, Newtownabbey, co. Antrim BT37 0QB.

City of Birmingham Polytechnic
Department of Fine Art

SENIOR LECTURER in SCULPTURE (HALF FULL-TIME)

To assist with the day to day running of the B.A. Course in Sculpture.

Salary Scale: SENIOR LECTURER, £5,523-£6,447 (bar) £6,906 including 1976 and 1977 supplements (pro rata for half-time post).

Further details and application forms (to be returned by 14th March, 1978) from: The Personnel Officer (THES), City of Birmingham Polytechnic, P Block, Perry Barr, Birmingham B42 2SU. (Re-advertisement.)

Leicester Polytechnic

ASSISTANT DIRECTOR
Faculty of Art and Design

Required for 1 May 1978 or as soon thereafter as possible.

Applications are invited from suitably qualified and experienced candidates.

Salary: £11,461 p.a. (under review)

Particulars and application form from Staffing Officer, Leicester Polytechnic, P.O.Box 143, Leicester, LE1 9BH.

Applications close on 1 April 1978.

EVERY WEEK
The THES is read by over 29,000 academic, teaching staff at universities, polytechnics, and colleges of education throughout the UK. Every week.

If you have an announcement to make to the academic community, there is no more effective or cheaper way than through the pages of the THES. For more information contact John Lamprecht, Advertisement Manager, on 01-837 1234.

The Times Higher Education Supplement

Polytechnics continued

PLYMOUTH POLYTECHNIC
School of Behavioural & Social Science
LECTURER II SOCIOLOGY
Salary £3,279 to £5,493 (plus supplement range £465 to £492 p.a.)

The successful applicant will possess relevant postgraduate qualifications and/or experience. Teaching to Honours Degree level and supervision of research students will be expected.

Application forms, to be returned by March 10, 1978, can be obtained with further particulars from the Personnel Officer.

PLYMOUTH POLYTECHNIC DRAKE CIRCUS PLYMOUTH PL4 8AA

HATFIELD
THE POLYTECHNIC
CENTRE FOR OR STUDIES
RESEARCH ASSISTANT IN INVESTIGATION

Applications are invited from graduates qualified in Social Sciences and/or the Mathematics of Operational Research to work on an action research project into the implementation of Inventory OR projects.

The appointment will be for 2 years with a possibility of extension for third year and the successful candidate will be expected to register for a Research Degree.

Salary £2,576-£2,536 per annum plus £60 London Weighting Allowance.

Further details and application forms are obtainable from the Staffing Office, The Hatfield Polytechnic, P.O. Box 109, Hatfield, Herts., or telephone Hatfield 68100, extension 309.

Closing date, 3rd March, 1978.

Please quote reference 969.

LONDON, N.11
MIDDLESEX POLYTECHNIC
LECTURER II/SENIOR LECTURER/PRINCIPAL LECTURER IN DANCE

Applications are invited for a full-time or part-time lecturer(s) in Dance, starting in September, 1978. Two or more of the following specialisms should be offered: Modern dance technique to intermediate level; Dance composition; Ethnic and community dance; The reconstruction of dance works from notation. The appropriate use of notation would be sought as integral to most areas of teaching.

The successful applicant(s) will teach on the Polytechnic's B.A. and B.A. Honours in Performance Arts and on other courses involving dance and dance education. He or she would also contribute to the development of dance within the Polytechnic.

For appointment at PL level candidates will have had professional teaching experience and be able to demonstrate the ability to initiate and conduct research.

Salary scales: Principal Lecturer £6,795-£8,547 per annum inc. Lecturer II/Senior Lecturer £5,241-£6,447 per annum inc. (pro rata for half-time appointments).

Please write for full details and an application form, posting the first class to: Principal Officer (Ref. A47CC), Middlesex Polytechnic, Bounds Green Road, London N11 2NQ. Closing date March 13.

SHEFFIELD CITY THE POLYTECHNIC
DEPARTMENT OF HOTEL AND CATERING INSTITUTIONAL MANAGEMENT & HOME ECONOMICS
RESEARCH ASSISTANT

The successful candidate will examine the perceptions, attitudes and motivation of students towards the Home Economics courses which promote them for hotel, catering and food industries. Applicants should have, or expect to be awarded, a relevant degree in education or psychology. The successful applicant will be required to seek registration for a higher degree of the C.N.A.A.

The appointment is for a fixed term of two years.

Salary scale: £2,661 to £3,039.

Requests for an application form in writing only please to the Personnel Department (Ref. RA/THES), Bellows House, Pond Street, Sheffield, S1 2BB, to whom completed forms should be returned by 10th March, 1978.

SOUTH-EASTERN EDUCATION AND LIBRARY BOARD
LISBURN TECHNICAL COLLEGE
Principalship

Group IV—Salary Pleading £9,124 plus £180 salary supplement

Applications are invited for the post of Principal which will become vacant at the end of the current academic year on the retirement of the present Principal, Mr D. Wright, JP, CEng, MIMechE, FRSA.

Lisburn Technical College is a well established and expanding College of Further Education. In its main buildings and out-centres it provides Further and Adult Educational Services for an area reaching from suburban Belfast to rural co Antrim and co Down. The main College is located in the quiet, prosperous town of Lisburn, some 10 miles from the City of Belfast.

The Principalship of Lisburn Technical College is a challenging and demanding post which offers an opportunity to influence the development and extension of Further Education activities which are taking place in Northern Ireland.

The successful candidate would normally be expected to take up post on August 1, 1978.

Further particulars and application forms may be obtained from the Chief Officer, South-Eastern Education and Library Board, 18 Windsor Avenue, Belfast BT9 6EF, telephone 661126. Applications must be received by the Chief Officer not later than noon on Tuesday, March 14, 1978.

Canvassing will entail disqualification.

DUNDEE COLLEGE OF TECHNOLOGY

SENIOR LECTURESHIP
IN QUANTITY SURVEYING

Applications are invited from persons with substantial teaching and professional experience. The person appointed will be required to be responsible, in the capacity of Course Leader, for the operation and development of a Degree Course in Quantity Surveying recently validated by C.N.A.A. Applicants must have a thorough knowledge of the nature of undergraduate education; possess appropriate academic qualifications, preferably at postgraduate level; and hold corporate membership of a relevant professional institution.

LECTURESHIP
IN QUANTITY SURVEYING

Applications are invited from persons who are graduates and/or professionally qualified in quantity surveying and who have a sound knowledge of the requirements of undergraduate education. The person appointed will be required to contribute to the teaching, operation and progressive development of a recently validated C.N.A.A. Degree Course in Quantity Surveying. Although the teaching duties will cover a range of subjects within the field of quantity surveying, the lecturer appointed will also be expected to specialise in an appropriate area and engage in research.

Salary Scales

Senior Lectureship on the scale £6,504-£7,236 (bar)-£8,220; Lectureship on the scale £4,653-£6,216 (bar)-£6,198; including supplements. In each case initial placing will depend upon approved prior experience of candidates. Financial assistance towards the cost of removal expenses may be payable.

Further particulars and application form obtainable from the Administrative Assistant (Establishment), Dundee College of Technology, Bell Street, Dundee DD1 1HG, to whom completed application forms should be returned by 17th March, 1978.

DUNDEE COLLEGE OF TECHNOLOGY

HEAD OF DEPARTMENT OF SURVEYING AND BUILDING

The College is a Scottish Central Institution with a substantial and growing range of degree and diploma courses. The Department of Surveying & Building is responsible for a quantity surveying degree course validated by C.N.A.A. and provides also H.N.D. and H.N.C. courses in building. The person appointed may be eligible for a professorship and applicants should have appropriate academic standing; they should have experience of teaching at degree level and relevant professional and/or research experience, together with a proven record of managerial ability. The salary, including supplements, is presently £8,102.

Further particulars and application form are obtainable from the Principal, Dundee College of Technology, Bell Street, Dundee DD1 1HG, to whom completed application should be returned by 10th March, 1978.

Colleges of Higher Education

Hull College of Higher Education
Cottingham Road Hull HU6 7RT
Telephone (0482) 41451

Senior Hall Manager (Residential)

SO1/2: £5,044-£5,797 pa inc.

to head the Polytechnic's team of Managers for three residential halls, be responsible for the administration of all non-domestic aspects, and liaise with the Domestic Bursar.

He or she will be the resident administrator for the new Wood Green Hall, guiding the development of a well-balanced residential community. A two-bedroomed centrally heated furnished flat is provided.

Graduate status is expected, together with a relevant professional qualification and experience of management within higher education or a relevant field.

Please write for full details and an application form, posting first class to: Appointments Officer (Ref. SH.4N), Middlesex Polytechnic, Bounds Green Road, London N11 2NQ. Closing date March 6th, 1978.

Middlesex Polytechnic

Hull College of Higher Education
Cottingham Road Hull HU6 7RT
Telephone (0482) 41451

Short-Term Research Assistants
FIVE POSTS

These posts will be for a period of 20 to 26 weeks. Salary Scale £2,469 to £4,377 per annum plus a supplement of £312, plus a further supplement of between £153 and £180 depending on placing on the above scales.

S.R.A. 1 To collect data on the national situation regarding the provision of part-time courses and on the areas of demand for such courses in Humberside, and in the light of these findings to suggest the policy which the College should adopt in this matter.

S.R.A. 2 To collect data on the controlled environment of glass-houses in the Hull area, including a survey of work which has already been done on nutrient film cultivation of glass-house crops, and to conduct a pilot experiment into this type of cultivation.

S.R.A. 3 To collect data on problems relating to sheltered housing and residential accommodation for the elderly.

S.R.A. 4 To collect data on the application of mathematics in project-based architectural education and to suggest further areas of potential application.

S.R.A. 5 To collect data on and generally help in designing and testing of experimental project rigs for use in student investigations.

Those appointed will work with a senior member of the College Staff, produce interim reports on request and full research report on completion of the work. Application forms can be obtained from Mrs. D. Liddell, Administrative Assistant (Personnel) at the above address to whom completed forms should be returned 14 days after the appearance of the advertisement.

This College is formed from an amalgamation of Colleges of Art Commerce Education Nautical Studies and Technology

Hull College of Higher Education
Cottingham Road Hull HU6 7RT
Telephone (0482) 41451

FACULTY OF DESIGN STUDIES

Applications are invited for the post of:

GRADE V HEAD OF SCHOOL OF FINE ART

which falls vacant as a result of the retirement of the present holder.

The School has responsibility for the following courses:
BA Fine Art (CNAA Honours Degree)
Foundation Course
Community Arts Programme

It includes a section providing History of Art and Complementary Studies for its own courses and for courses in the School of Design.

The person appointed will be expected to have appropriate administrative ability broad interests and significant professional experience in Fine Art and to be a person of vision in the field of arts in Higher Education.

Further particulars and forms of application may be obtained from Mrs. D. Liddell, Administrative Assistant (Personnel) at the above address.

This College is formed from an amalgamation of Colleges of Art Commerce Education Nautical Studies and Technology

THE NATIONAL INSTITUTE FOR HIGHER EDUCATION, LIMERICK, IRELAND

The first phase of development of the riverside campus was officially opened in 1977. An extensive range of advanced facilities, provided as part of a World Bank project permits the expansion of existing activities. The current National Diploma, Pass and Honours Degree full-time programmes are being expanded and a variety of new programmes introduced at undergraduate, post-graduate and post-experience levels.

PRODUCTION ENGINEERING SENIOR LECTURER

Person appointed to this senior post will be expected to participate in the operation of the existing four-year and three-year diploma programmes in Materials and Production Engineering, in the planning and development of a variety of new teaching and research programmes in related areas and generally assisting the Department Head. Applicants should have proven ability in the field of production engineering and a specialist knowledge of one or more technological areas. While an honours primary degree is the minimum academic qualification a relevant post-graduate qualification is desirable.

Salary: £6,861-£8,228.

Plus £100 p.a. disarriage and £70 p.a./child allowances together with other benefits.

Application material available from the Personnel Office, The National Institute for Higher Education, Limerick, Ireland, to be completed and returned by Friday, 17 March, 1978.

Hull College of Higher Education
Cottingham Road Hull HU6 7RT
Telephone (0482) 41451

FACULTY OF TEACHER EDUCATION AND APPLIED SOCIAL STUDIES

SCHOOL OF TEACHER EDUCATION

Applications are invited for the following post:

Lecturer II/Senior Lecturer in EDUCATION

Applicants should have good, recent experience in teaching primary school mathematics and language. A qualification and interest in the field of Psychology or Child Development will be an advantage.

SCHOOL OF APPLIED SOCIAL STUDIES

Applications are invited from suitably qualified and experienced men and women for the post of:

Lecturer II/Senior Lecturer in SOCIAL WORK

with particular reference to the Education and Training of Mentally Handicapped Adults. The successful candidate will join an established team of staff concerned with teaching to Dip. T.M.H.A., C.S.S., C.Q.S.W., and Inservice Courses for Social Services Personnel. Experience of or a qualification in the education of the handicapped is required together with a knowledge of the needs of and provision for other categories of staff in the Social Services.

Further particulars and forms of application may be obtained from Mrs. D. Liddell, Administrative Assistant (Personnel), at the above address, and should be returned not later than 10th March, 1978.

This College is formed from an amalgamation of Colleges of Art Commerce Education Nautical Studies and Technology

Bulmershe College of Higher Education

Applications are invited from suitably qualified men and women for the post of

LECTURER II/SENIOR LECTURER in United States Studies

to assist in the development and teaching of a new Minor (two-year) Course in United States Studies within the College's B.A. Honours Combined Studies Degree (CNAA). Applicants should in addition be able to contribute to the teaching of either History or English.

Further particulars and application forms may be obtained from the Academic Registrar (US1), Bulmershe College of Higher Education, Woodlands Avenue, Earley, Reading RG6 1HY, Tel.: Reading (0734) 663087. Completed forms should be returned by Friday, 17th March 1978.

WINCHESTER
KING ALFRED'S COLLEGE
SCHOOL OF EDUCATION

Applications from well qualified GRADUATES are invited as soon as possible for two posts in the School of Education. Candidates should be prepared to offer expertise in one or more of the following areas:

MENTAL EDUCATION
EDUCATIONALLY SUB-NORMAL (Severe)
MOTIVATIONAL PROBLEMS/MALADJUSTMENT
ASSESSMENT AND EVALUATION OF LEARNING AND TEACHING SKILLS
ORGANISATION AND ADMINISTRATION

Candidates should have relevant school experience, be preferably a higher degree in an appropriate field, and the ability to contribute to existing degree, B.Ed. and Dip.Ed. service courses and to assist in the planning and development of courses up to higher degree level.

Appointments which will be effective from 1st September, 1978, will be made in accordance with current Senior Lecturer/Lecturer Grade II qualifications and experience.

Further details may be obtained from the Principal.

Closing date of applications: 6th March, 1978.

WINCHESTER
KING ALFRED'S COLLEGE

Applications are invited for the post of COLLEGE COUNSELLOR to take effect from 1st September, 1978. Candidates should be preferably qualified with sound and successful experience as Counsellors in higher education institutions. The level of appointment will not be below Senior Lecturer.

Further information may be obtained from the Principal to whom application should be made by 6th March, 1978.

Holidays and Accommodation

HOMES FOR EXCHANGE OR RENTAL

Private home exchanges arranged throughout Europe and Worldwide. Rent your home too.

INTERCHANGE (U.K.)
North Row, Mayfair, LONDON W.1. 01-437 9534

Colleges of Education

HOLIDAY CENTRE FOR DARTMOOR, DEVON AND CORNWALL
SUMMER 1978
PEAK PERIOD HOLIDAYS AT ROCK BOTTOM PRICES

Booked your holiday yet? If not, come and enjoy a family holiday or just relax in the splendid modern accommodation at the College of St. Mark and St. John, Derriford Road, Plymouth. The amenities available include licensed bar, TV lounge, laundry, games room, indoor and outdoor sports including swimming pool and launderette, organised events. Conducted visits to places of interest. College ideally situated close to Dartmoor and Plymouth, the centre of Devon and Cornwall. Vacancies now available, though booking is advised. Bed and breakfast only £3.50 per day. Weekly and group prices available on request. Self-catering and full board terms. Reduction for children under 14. Brochure and booking form available on application to Mrs. Shirley Hayward (0752) 777188.